Service
Service
Service

Service Manual

Horizontal Frequency

30-83 KHz

Table of Contents

SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFOMER FOR THIS UNIT WHEN SERVICING

Revision List

Version	Release Date	Revision History	TPV Model Name
A00	Nov.-30-2012	Initial release	T9CMUF7BBGACDNE

Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all AOC Company Equipment. The service procedures recommended by AOC and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. AOC could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, AOC has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by AOC must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.
Hereafter throughout this manual, AOC Company will be referred to as AOC.

WARNING

Use of substitute replacement parts, which do not have the same, specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from AOC. AOC assumes no liability, express or implied, arising out of any unauthorized modification of design.
Servicer assumes all liability.

FOR PRODUCTS CONTAINING LASER:
DANGER-Invisible laser radiation when open AVOID DIRECT EXPOSURE TO BEAM.
CAUTION-Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
CAUTION -The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.
Take care during handling the LCD module with backlight unit
-Must mount the module using mounting holes arranged in four corners.
-Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
-Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
-Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
-Make certain that treatment person’s body is grounded through wristband.
-Do not leave the module in high temperature and in areas of high humidity for a long time.
-Avoid contact with water as it may a short circuit within the module.
-If the surface of panel becomes dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)

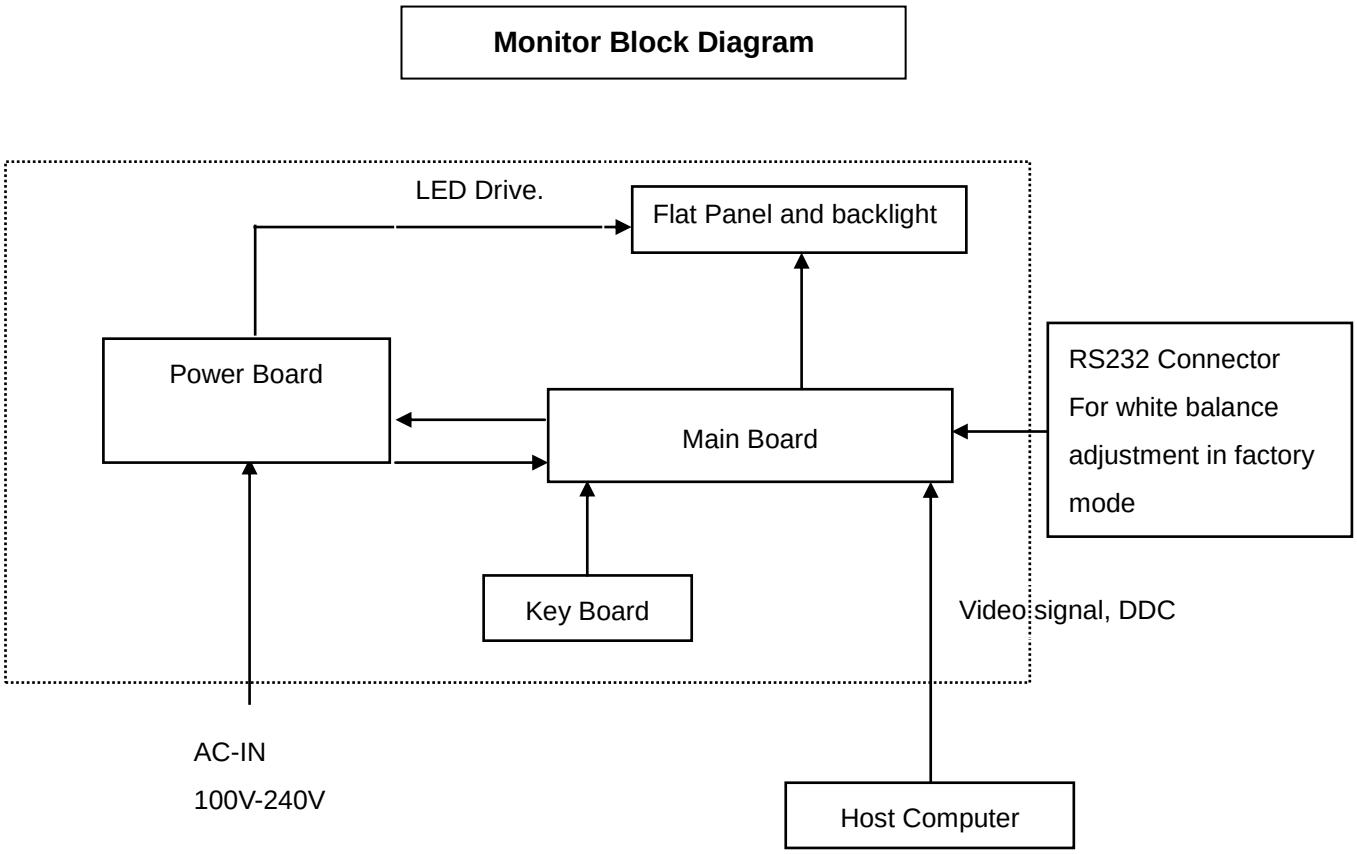
1. Monitor Specifications

Panel	Model name	E2060SWDA/ E2060PWDA /E2060SW/E2060SWD
	Driving system	TFT Color LCD
	Viewable Image Size	49.5cm diagonal
	Pixel pitch	0.27mm(H)X0.27mm(V)
	Video (E2060SWDA/ E2060PWDA/E2060SWD)	R, G, B Analog Interface & Digital Interface
	Video (E2060SW)	R, G, B Analog Interface
	Separate Sync.	H/V TTL
	Display Color	16.7M Colors
	Dot Clock	108MHz
Resolution	Horizontal scan range	30 kHz - 83 kHz
	Horizontal scan Size(Maximum)	432mm
	Vertical scan range	50 Hz - 76 Hz
	Vertical scan Size(Maximum)	239.76mm
	Optimal preset resolution	1600×900@60Hz
	Plug & Play	VESA DDC2B/CI
	Input Connector (E2060SWDA/ E2060PWDA/E2060SWD)	D-Sub 15pin; DVI 24pin
	Input Connector (E2060SW)	D-Sub 15pin;
	Input Video Signal	Analog: 0.7Vp-p(standard), 75 OHM, TMDS
	Power Source	100-240V~, 50/60Hz
	Power Consumption	Active: 23 W (typical)
		Standby < 0.5 W
	Off timer	0-24 hrs
	Speakers(E2060SWDA/ E2060PWDA)	2WX2
Physical Characteristics	Connector Type (E2060SWDA/ E2060PWDA/E2060SWD)	15-pin Mini D-Sub DVI-D
	Connector Type (E2060SW)	15-pin Mini D-Sub
	Signal Cable Type	Detachable
Environmental	Temperature:	
	Operating	0° to 40°
	Non-Operating	-25° to 55°
	Humidity:	
	Operating	10% to 85% (non-condensing)
	Non-Operating	5% to 93% (non-condensing)
	Altitude:	
	Operating	0~ 3658m (0~ 12000 ft)
	Non-Operating	0~ 12192m (0~ 40000 ft)

2. LCD Monitor Description

The LCD monitor will contain a main board, a power board, a key board which house the flat panel control logic, brightness control logic and DDC.

The power part will provide AC to DC Inverter voltage to drive the backlight of panel and the main board chips each voltage.



3. Operating Instructions

3.1 General Instructions

This monitor only has one external control function button; press the Power/Auto Configuration button to turn the monitor on or off.

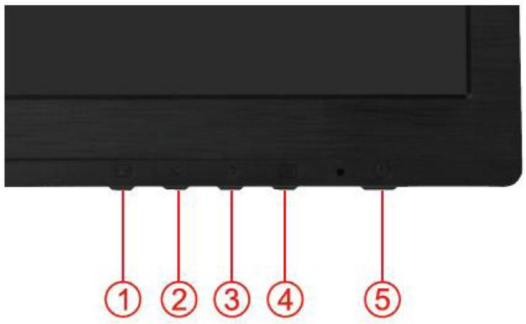
If you need to adjust other functions, please visit the official AOC website (www.aoc.com)to download and install AOC's exclusive i-Menu application software, and then perform related function adjustments to get the screen you require.

• Connect the power cord properly.

• Connect the signal cable onto the PC's graphics card.

• Push the button to start the monitor, and the power indicator will light up..

3.2 Control Buttons



E960SRDA/ E960PRDA /E2060SWDA/E2060PWDA / E2260SDA/ E2260PDA：

1	Source/Auto/Exit
2	ECO(DCR)/<
3	Volume / >
4	Menu/Enter
5	Power

Power

Press the Power button to turn on/off the monitor.

Eco (DCR)/ <

Press the Eco key continuously to select the Eco mode of brightness and DCR on when there is no OSD. (Eco mode hot key may not be available in all models).

Volume / >

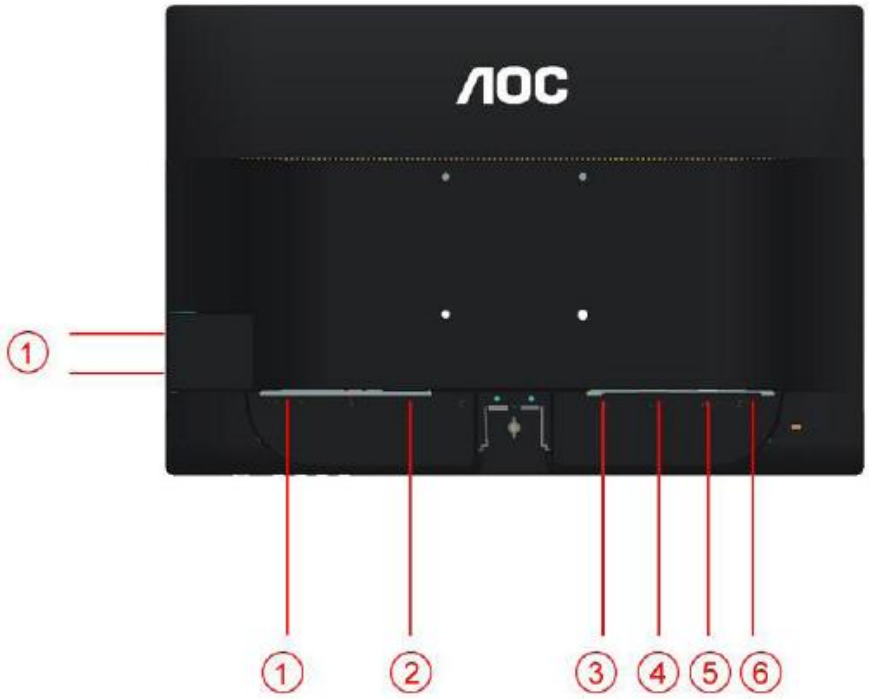
When there is no OSD,Press Volume button to active volume adjustment bar,Press <or + to adjust volume(Only for the models with speakers)

Auto / Exit

When there is no OSD, press Auto/Source button continuously about 3 second to do auto configure .

Source hot key

When the OSD is closed, press Source button will be Source hot key function. Press Source button continuously to select the input source showed in the message bar , press Menu/Enter button to change to the source selected



1	USB (Optional)
2	Power
3	/
4	DVI (Optional)
5	Analog (DB-15 VGA cable)
6	Line in (Optional)

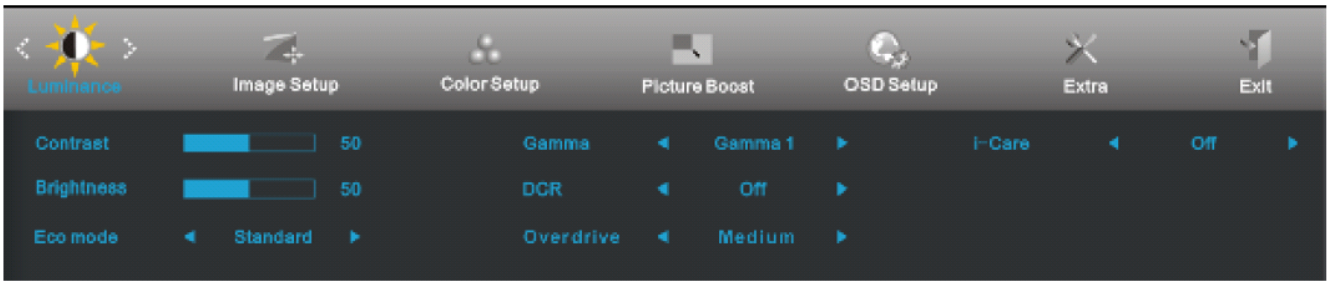
To protect equipment, always turn off the PC and LCD monitor before connecting.

1. Connect the power cable to the AC port on the back of the monitor.
2. Connect one end of the 15-pin D-Sub cable to the back of the monitor and connect the other end to the computer's D-Sub port.
3. (Optional –Requires a video card with DVI port)Connect one end of the DVI cable to the back of the monitor and connect the other end to the computer‟s DVI port.
4. /
5. (Optional)Connect the audio cable to audio in port on the back of the monitor
6. Turn on your monitor and computer.

If your monitor displays an image, installation is complete. If it does not display an image, please refer Troubleshooting.

3.3 OSD Setting

Basic and simple instruction on the control keys.



1) Press the **MENU-button** to activate the OSD window.

2) Press < or > to navigate through the functions. Once the desired function is highlighted, press the **MENU-button** to activate it . press**<** or **>**to navigate through the sub-menu functions. Once the desired function is highlighted, press **MENU-button** to activate it.

3) Press**<** or **>**to change the settings of the selected function. Press AUTO to exit. If you want to adjust any other function, repeat steps 2-3.

4) OSD Lock Function: To lock the OSD, press and hold the MENU button while the monitor is off and then press **power button** to turn the monitor on. To un-lock the OSD - press and hold the MENU button while the monitor is off and then press **power button** to turn the monitor on.

Notes:

1) If the product has only one signal input, the item of "Input Select" is disable to adjust.

2) If the product screen size is 4:3 or input signal resolution is wide format, the item of "Image Ratio" is disable to adjust.

3) One of DCR, Color Boost, and Picture Boost functions is active, the other two function is turned off accordingly.

Luminance

1 Press **MENU** (Menu) to display menu.

2 Press < or > to select (Luminance), and press **MENU** to enter.

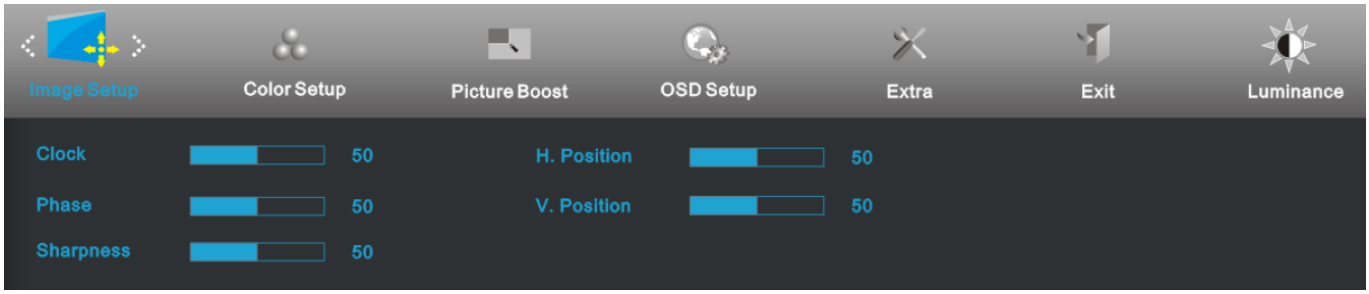
3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Brightness	0-100		Backlight Adjustment
	Contrast	0-100		Contrast from Digital-register.
	Eco mode	Standard		Standard Mode
		Text		Text Mode
		Internet		Internet Mode
		Game		Game Mode
		Movie		Movie Mode
		Sports		Sports Mode
	Gamma	Gamma1		Adjust to Gamma1
		Gamma2		Adjust to Gamma 2
		Gamma3		Adjust to Gamma 3
	DCR	Off		Disable dynamic contrast ratio
		On		Enable dynamic contrast ratio
	Overdrive	Weak		Adjust the response time (only for E2260PHU/E2260SHU/ E2460PWHU/E2460SWHU/E2460SHU/E2460PHU)
		Medium		
		Strong		
		Off		
	i-Care	On		adjusts the brightness according to light intensity (only for E2260PHU/E2260SHU/ E2460PWHU/E2460SWHU/E2460SHU/E2460PHU)
		Off		

Image Setup



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select  (Image Setup), and press **MENU** to enter.

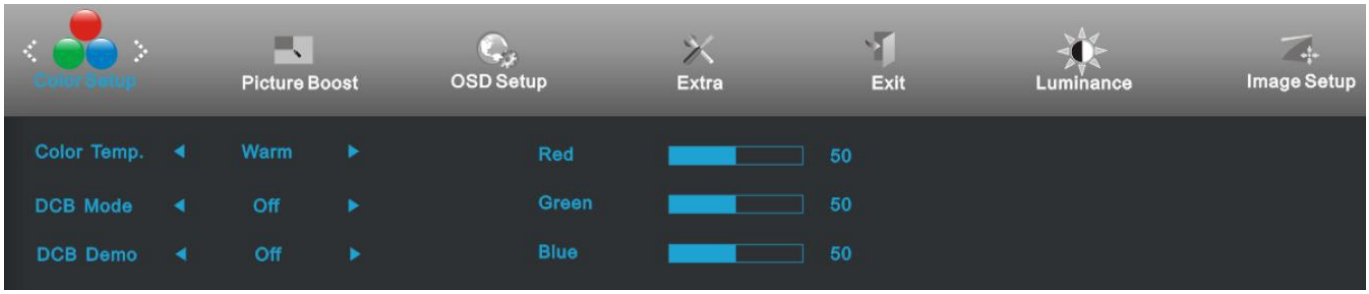
3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Clock	0-100	Adjust picture Clock to reduce Vertical-Line noise.
	Phase	0-100	Adjust Picture Phase to reduce Horizontal-Line noise
	Sharpness	0-100	Adjust picture sharpness
	H.Position	0-100	Adjust the horizontal position of the picture.
	V.Position	0-100	Adjust the vertical position of the picture.

Color Setup



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select (Color Setup), and press **MENU** to enter.

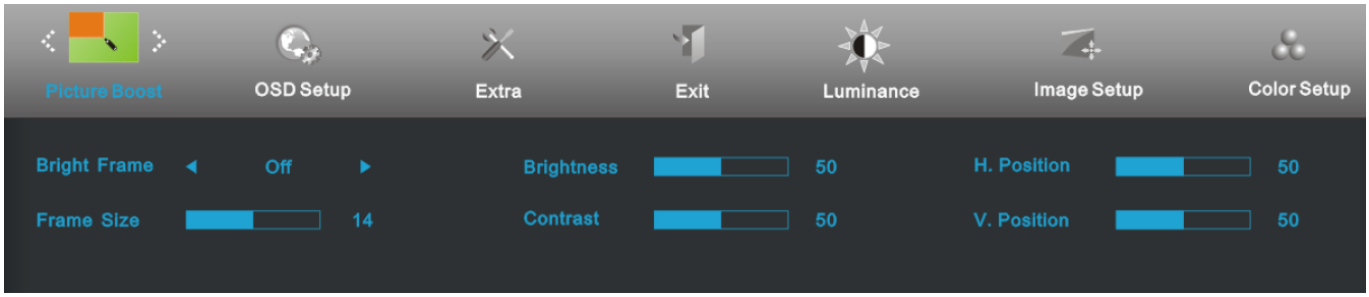
3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Color setup.	Warm		Recall Warm Color Temperature from EEPROM.
		Normal		Recall Normal Color Temperature from EEPROM.
		Cool		Recall Cool Color Temperature from EEPROM.
		sRGB		Recall SRGB Color Temperature from EEPROM.
		User	Red	Red Gain from Digital-register
			Green	Green Gain Digital-register.
			Blue	Blue Gain from Digital-register
	DCB Mode	Full Enhance	on or off	Disable or Enable Full Enhance Mode
		Nature Skin	on or off	Disable or Enable Nature Skin Mode
		Green Field	on or off	Disable or Enable Green Field Mode
		Sky-blue	on or off	Disable or Enable Sky-blue Mode
		AutoDetect	on or off	Disable or Enable AutoDetect Mode
	DCB Demo		On or off	Disable or Enable Demo

Picture Boost



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select  (Picture Boost), and press **MENU** to enter.

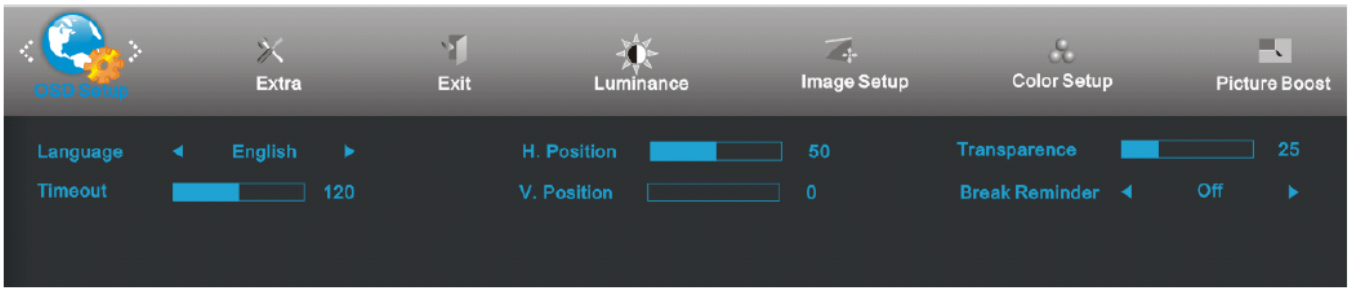
3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Frame Size	14-100	Adjust Frame Size
	Brightness	0-100	Adjust Frame Brightness
	Contrast	0-100	Adjust Frame Contrast
	H. position	0-100	Adjust Frame horizontal Position
	V.position	0-100	Adjust Frame vertical Position
	Bright Frame	on or off	Disable or Enable Bright Frame

OSD Setup



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select (OSD Setup), and press **MENU** to enter.

3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	H.Position	0-100	Adjust the horizontal position of OSD
	V.Position	0-100	Adjust the vertical position of OSD
	Timeout	5-120	Adjust the OSD Timeout
	Transparence	0-100	Adjust the transparence of OSD
	Language		Select the OSD language

Extra

1 Press **MENU** (Menu) to display menu.

2 Press < or > to select (Extra), and press **MENU** to enter.

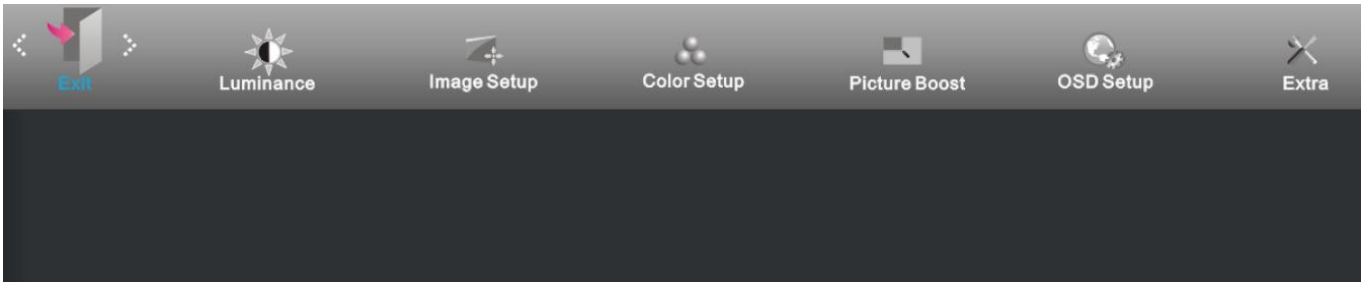
3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Input Select	Auto / Analog / DVI / HDMI	Select input signal source. （E2260PHU/E2260SHU/ E2460PWHU/E2460SWHU/E2460SHU/E2460PHU）
	Input Select	Auto / Analog / DVI	Select input signal source. （E960SRDA/ E960PRDA E2060SWDA/E2060PWDA/ E2060SWD/ E2260SD/ E2260SDA/ E2260PDA）
	Input Select	Analog	Select input signal source.（E2060SW）
	Auto Config	yes or no	Auto adjust the picture to default.
	Off timer	0-24hrs	Select DC off time.
	Image Ratio	wide or 4:3	Select wide or 4:3 format for display.
	DDC-CI	yes or no	Turn ON/OFF DDC-CI Support.
	Reset	yes or no	Reset the menu to default.
	Information		Show the information of the main image and sub-image source.

Exit



1 Press **MENU** (Menu) to display menu.

2 Press < or > to select (Exit), and press **MENU** to enter.

3 Press < or > to select submenu, and press **MENU** to enter.

4 Press < or > to adjust.

5 Press **AUTO** to exit.

	Exit		Exit the main OSD

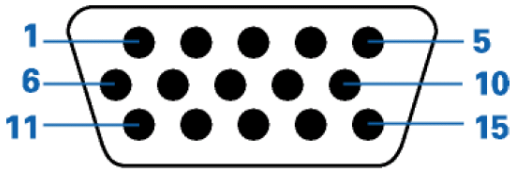
LED Indicator

Status	LED Color	
Full Power Mode	Green or Blue	
Active-off Mode	Orange or red	

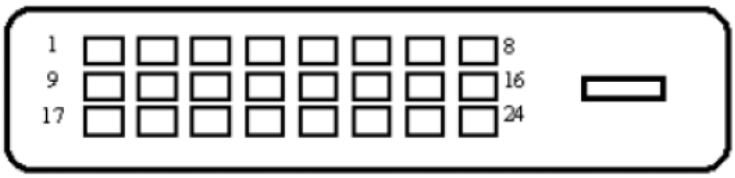
4. Input/Output Specification

4.1 Input Signal Connector

Pin Assignments



Pin Number	15-Pin Side of the Signal Cable
1	Video-Red
2	Video-Green
3	Video-Blue
s	N.C.
5	Detect Cable
6	GND-R
7	GND-G
8	GND-B
9	+5V
10	Ground
11	N.C.
12	DDC-Serial data
13	H-sync
14	V-sync
15	DDC-Serial clock



Pin Number	24-Pin Color Display Signal Cable	Pin Number	24-Pin Color Display Signal Cable
1	TMDS data 2−	13	TMDS data 3+
2	TMDS data 2+	14	+5V Power
3	TMDS data 2/4 Shield	15	Ground (for+5V)
4	TMDS data 4−	16	Hot Plug Detect
5	TMDS data 4+	17	TMDS data 0−
6	DDC Clock	18	TMDS data 0+
7	DDC Data	19	TMDS data 0/5 Shield
8	N.C.	20	TMDS data 5−
9	TMDS data 1−	21	TMDS data 5+
10	TMDS data 1+	22	TMDS Clock Shield
11	TMDS data 1/3 Shield	23	TMDS Clock +
12	TMDS data 3−	24	TMDS Clock −

4.2 Factory Preset Display Modes

STAND	RESOLUTION	HORIZONTAL FREQUENCY(kHZ)	VERTICAL FREQUENCY(Hz)
VGA	640×480 @60Hz	31.469	59.940
VGA	640×480 @67Hz	35.000	66.667
VGA	640×480 @72Hz	37.861	72.809
VGA	640×480 @75Hz	37.500	75.000
Dos-mode	720×400 @70Hz	31.469	70.087
SVGA	800×600 @56Hz	35.156	56.250
SVGA	800×600 @60Hz	37.879	60.317
SVGA	800×600 @72Hz	48.077	72.188
SVGA	800×600@75Hz	46.875	75.000
SVGA	832×624 @75Hz	49.725	74.500
XGA	1024×768 @60Hz	48.363	60.004
XGA	1024×768 @70Hz	56.476	70.069
XGA	1024×768 @75Hz	60.023	75.029
SXGA	1280×1024@60Hz	63.981	60.020
SXGA	1280×1024@75Hz	79.976	75.025
WSXGA	1600×900 @60Hz	55.540	59.978

4.3 Panel Specification

4.3.1 General Features

M195FGE-L20 is a 19.5” TFT Liquid Crystal Display module with WLED Backlight unit and 30 pins 2ch-LVDS interface. This module supports 1600 x 900 HD+ mode and can display up to 16.7M colors. The converter module for Backlight is not built in.

4.3.2 Display Characteristics

Item	Specification	Unit
Screen Size	19.5” real diagonal	
Driver Element	a-si TFT active matrix	-
Pixel Number	1600 x R.G.B. x 900	pixel
Pixel Pitch	0.27 (H) x 0.27 (V)	mm
Pixel Arrangement	RGB vertical stripe	-
Display Colors	16.7M	color
Transmissive Mode	Normally white	-
Surface Treatment	AG type, 3H hard coating, Haze 25	-
Luminance, White	250	Cd/m2
Color Gamut	72% of NTSC(Typ.)	-
ROHS,Halogen Free &TCO 5.2	ROHS, Halogen Free TCO 5.2 compliance	
Power Consumption	Total14.154 W (Max.) @ cell 3.75 W (Max.), BL 10.404 W(Max.)	

Item		Min.	Typ.	Max.	Unit
Module Size	Horizontal (H)	451.5	452.0	452.5	mm
	Vertical (V)	262.5	263.0	263.5	mm
	Thickness (T)	-	10.5	11	mm
Bezel Area	Horizontal	434.8	435.3	435.8	mm
	Vertical	242.56	243.06	243.56	mm
Active Area	Horizontal	-	432.0	-	mm
	Vertical	-	239.76	-	mm
Weight		-	1430	1500	g

4.3.3 Electrical Characteristics

TFT LCD MODULE

Vcc = 5.0 V, Ta = 25 ± 2 ºC, Fr = 75Hz

Parameter		Symbol	Value			Unit
			Min.	Typ.	Max.	
Power Supply Voltage		Vcc	4.5	5	5.5	V
Ripple Voltage		V_{RP}	-	-	300	mV
Rush Current		I_{RUSH}	-	-	3	A
Power Supply Current	White			0.5	0.6	A
	Black			0.65	0.75	A
	Vertical Stripe			0.65	0.75	A
Power Consumption		PLCD				Watt
LVDS differential input voltage		Vid	100	-	600	mV
LVDS common input voltage		Vic	1.0	1.2	1.4	V
Logic High Input Voltage		VIH	-	-	0.1	V
Logic Low Input Voltage		VIL	-0.1	-		V

Back Light Unit

Ta = 25 ± 2.ºC

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
LED Light Bar Input Voltage Per Input Pin	VPIN	---	31	34	V	(1), Duty=100%, IPIN=80mA
LED Light Bar Current Per Input Pin	IPIN		65	69	mA	(1), (2) Duty=100%
LED Life Time	LLED	50000			Hrs	(3)
Power Consumption	PBL	---	8.06	8.84	W	(1) Duty=100%, IPIN=80A

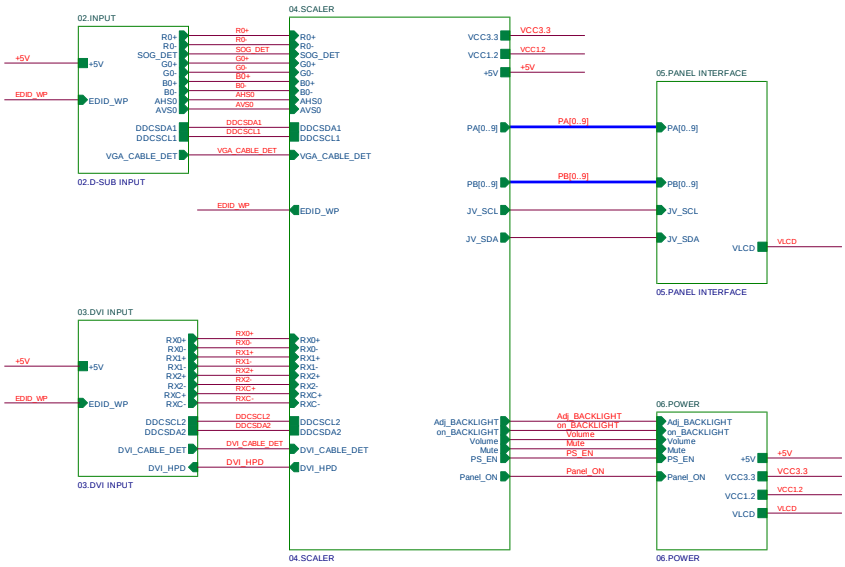
4.3.4 Optical Characteristics

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Color Chromaticity (CIE 1931)	Red	Rx	θ_x=0°, θ_Y =0° CS-2000 R=G=B=255 Gray scale	Typ – 0.03	0.641	Typ + 0.03	-
		Ry			0.338		
	Green	Gx			0.315		
		Gy			0.629		
	Blue	Bx			0.159		
		By			0.059		
	White	Wx			0.313		
		Wy			0.329		
Center Luminance of White (Center of Screen)		L_C		200	250	-	cd/m^2
Contrast Ratio		CR		700	1000	-	-
Response Time		T_R	θ_x=0°, θ_Y =0°	-	1.5	2.5	ms
		T_F		-	3.5	5.5	
White Variation		W	$_x$=0, $_Y$ =0	75	-	-	%
Viewing Angle	Horizontal	θx- + θx+	CR ≧ 10	150	170	-	Deg.
	Vertical	θy- + θy+		140	160	-	
Viewing Angle	Horizontal	θx- + θx+	CR ≧ 5	160	178	---	Deg.
	Vertical	θy- + θy+		150	170	---	

5. Block Diagram

5.1 Main Board

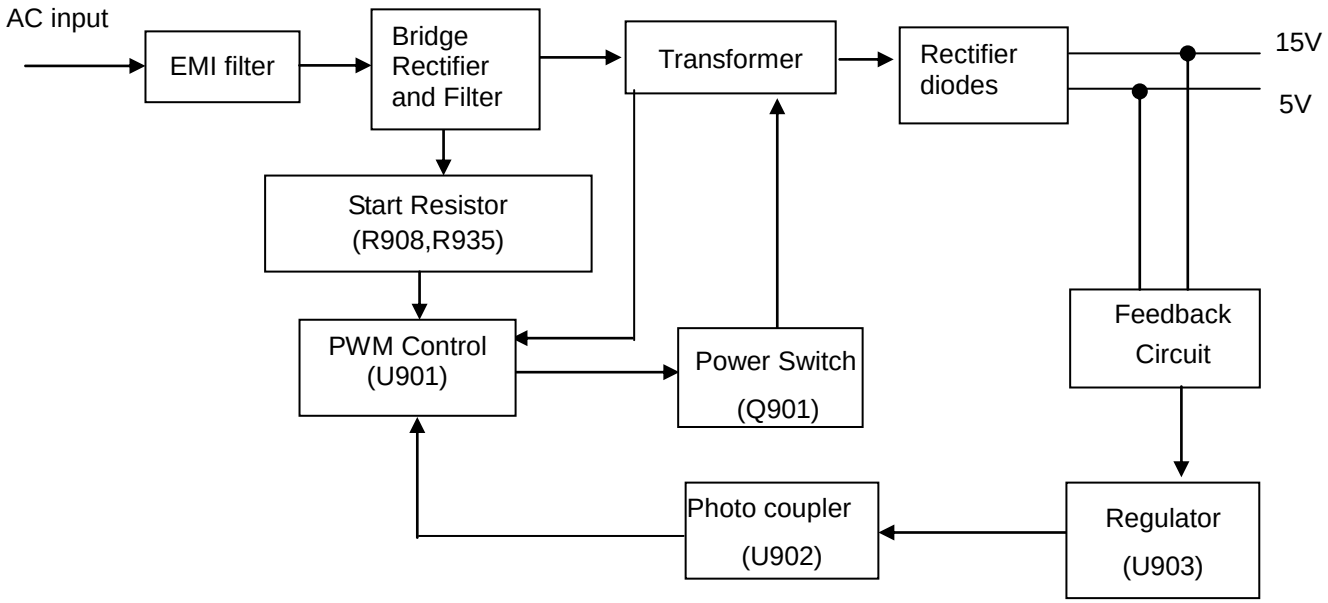
715G5270M01000004I

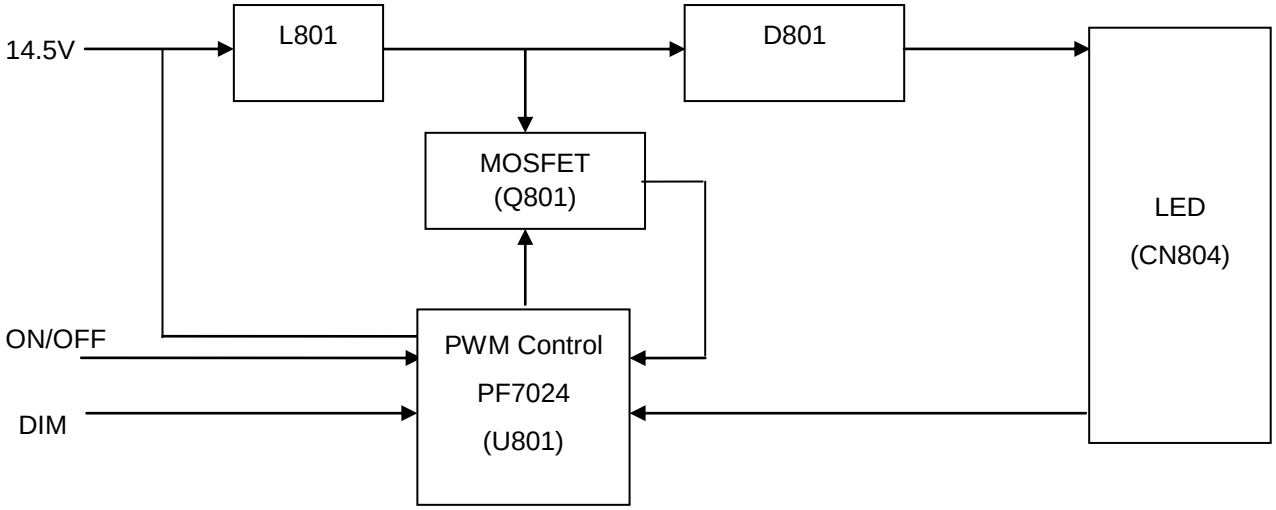


TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	AOC E960SWDA/SDA	Size	B
結爾瓜爾魔	G5270-M01-000-0040-7-120710	TPV MODEL	DUAL	Rev	1
Key Component	COVER & REVISE HISTORY	PCB NAME	715G5270M010000040	秘書	<秘書>
Date	Wednesday, July 11, 2012	Sheet	2 of 7		

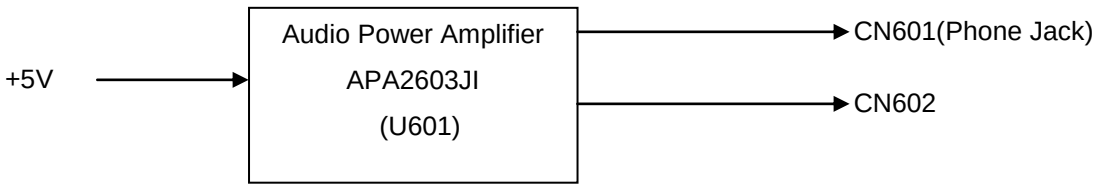
5.2 Power Board

715G4497P05000001C





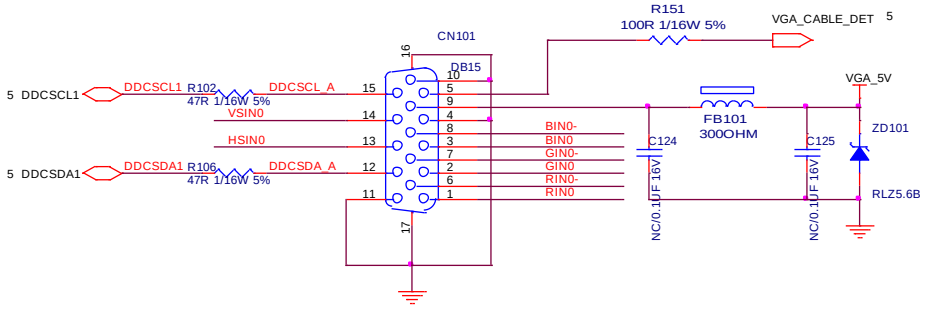
Audio

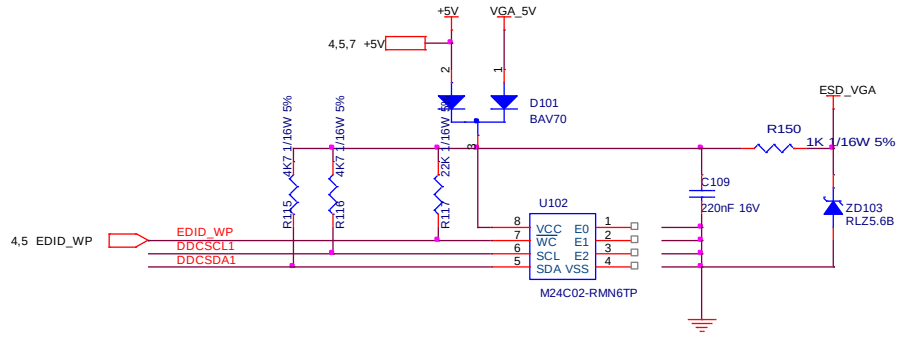


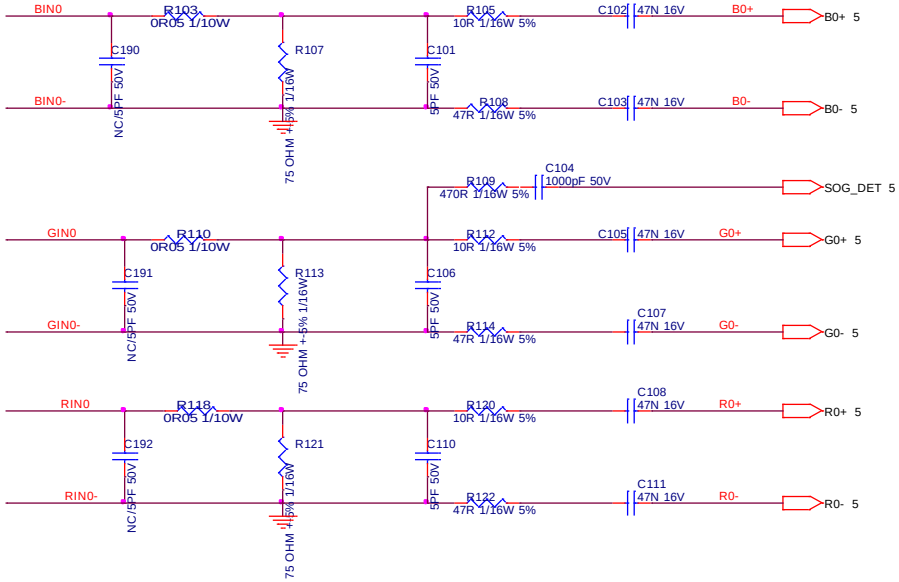
6. Schematic

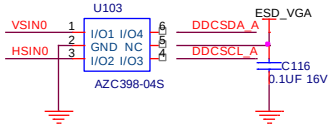
6.1 Main Board

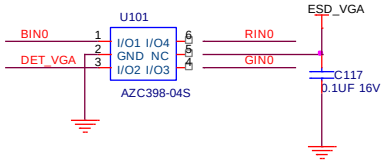
715G5270M01000004I

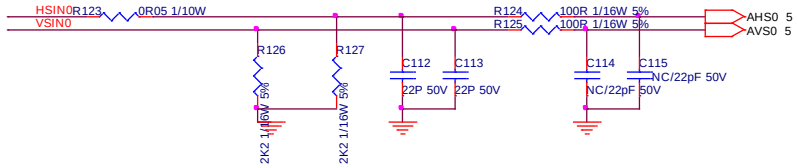




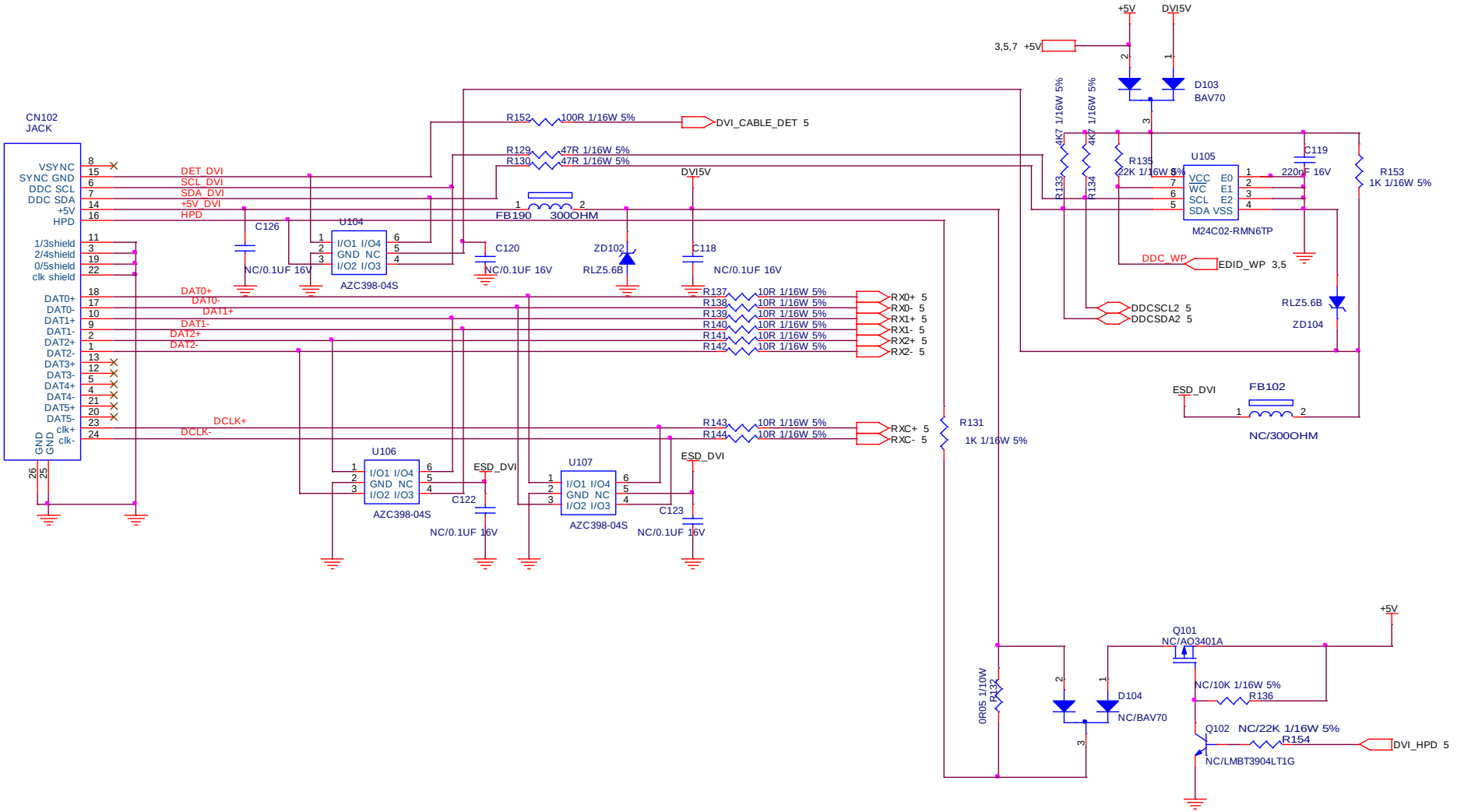




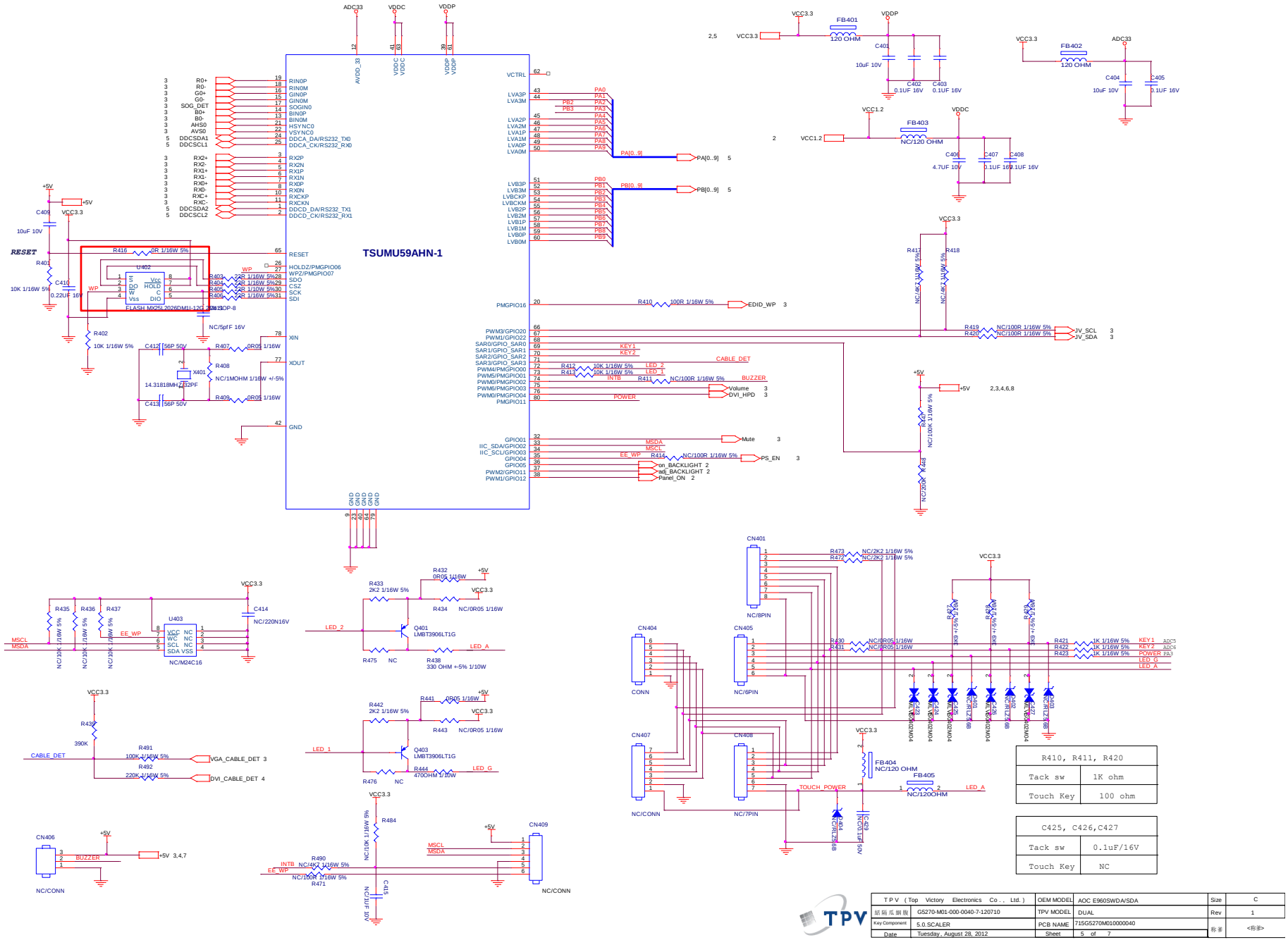




TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	AOC E960SWDA/SDA	Size	B
話 筒 瓜 貓 腹	G5270-M01-000-0040-7-120710	TPV MODEL	DUAL	Rev	1
Key Component	D-SUB I/O	PCB NAME	715G5270M010000040	称 爹	<称爹>
Date	Wednesday, July 11, 2012	Sheet	3 of 7		



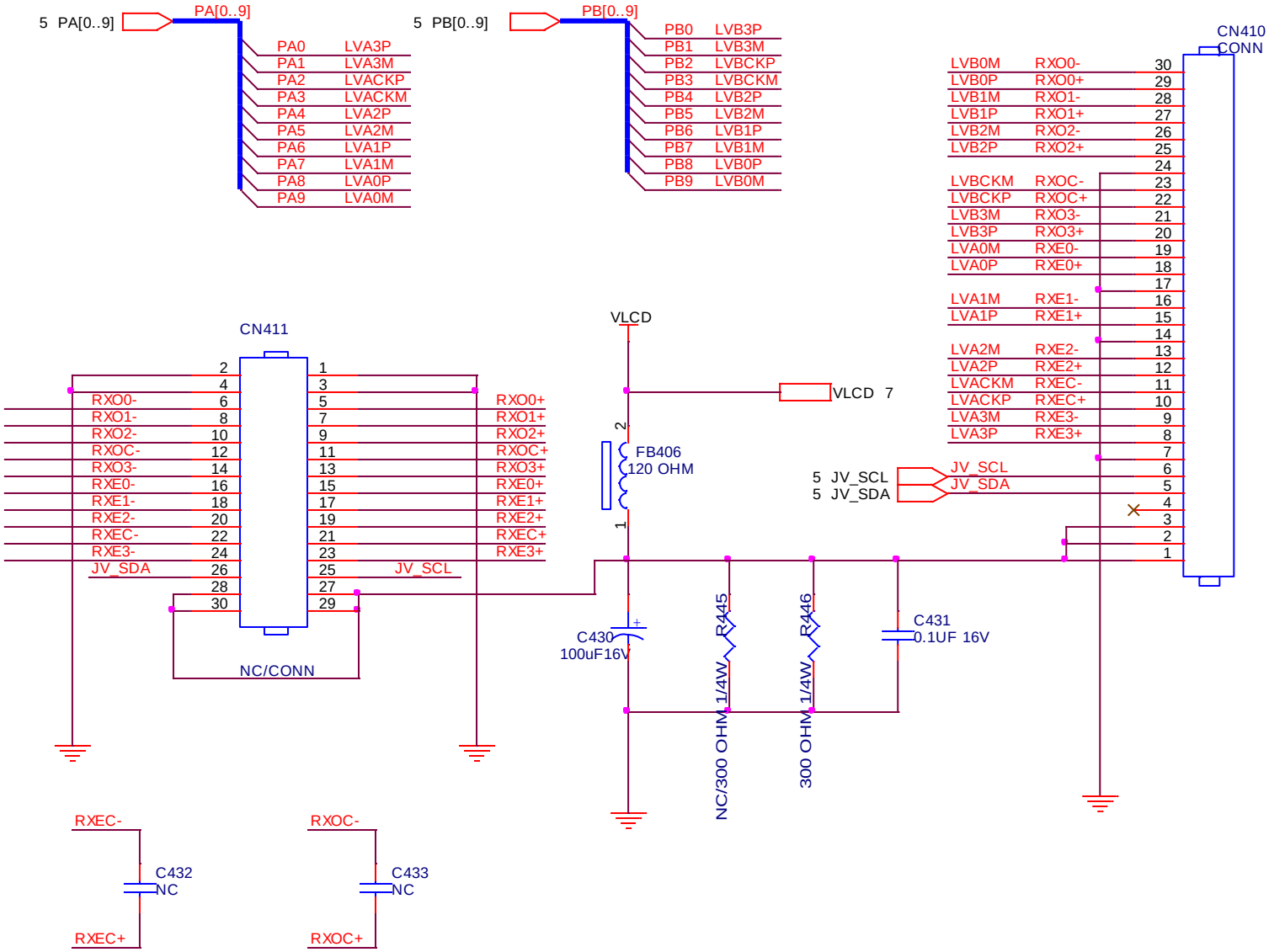
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	AOC E960SWDA/SDA	Size	B
結隔瓜綢腹	G5270-M01-000-0040-7-120710	TPV MODEL	DUAL	Rev	1
Key Component	DVI	PCB NAME	715G5270M010000040	称爹	<称爹>
Date	Wednesday, July 11, 2012	Sheet	4 of 7		



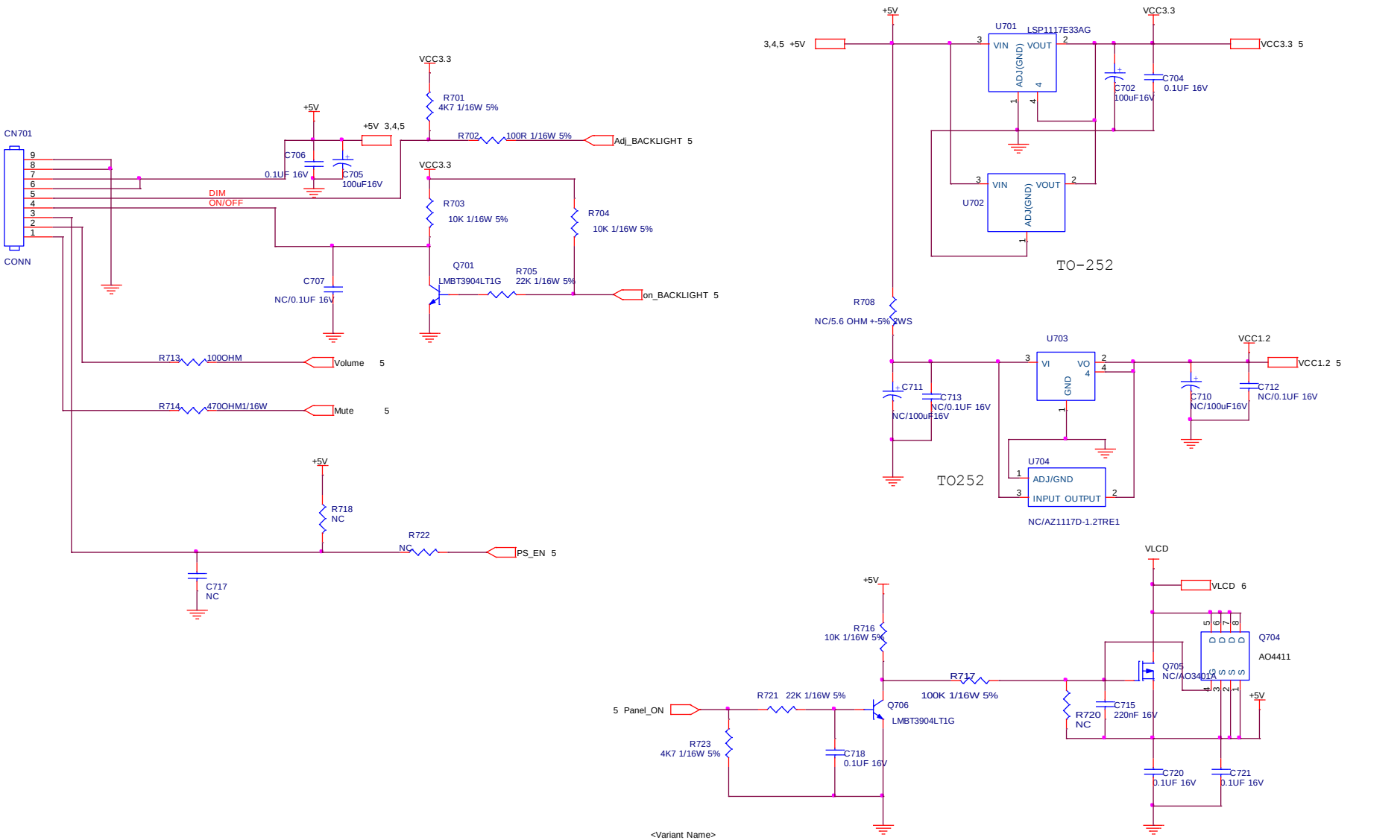
R410, R411, R420	
Tack sw	1K ohm
Touch Key	100 ohm

C425, C426,C427	
Tack sw	0.1uF/16V
Touch Key	NC

TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	AOC E960SWDA/SDA	Size	C
結構瓜損腹	G5270-M01-000-0040-7-120710	TPV MODEL	DUAL	Rev	1
Key Component	5.0.SCALER	PCB NAME	715G5270M010000040	称多	<称多>
Date	Tuesday, August 28, 2012	Sheet	5 of 7		



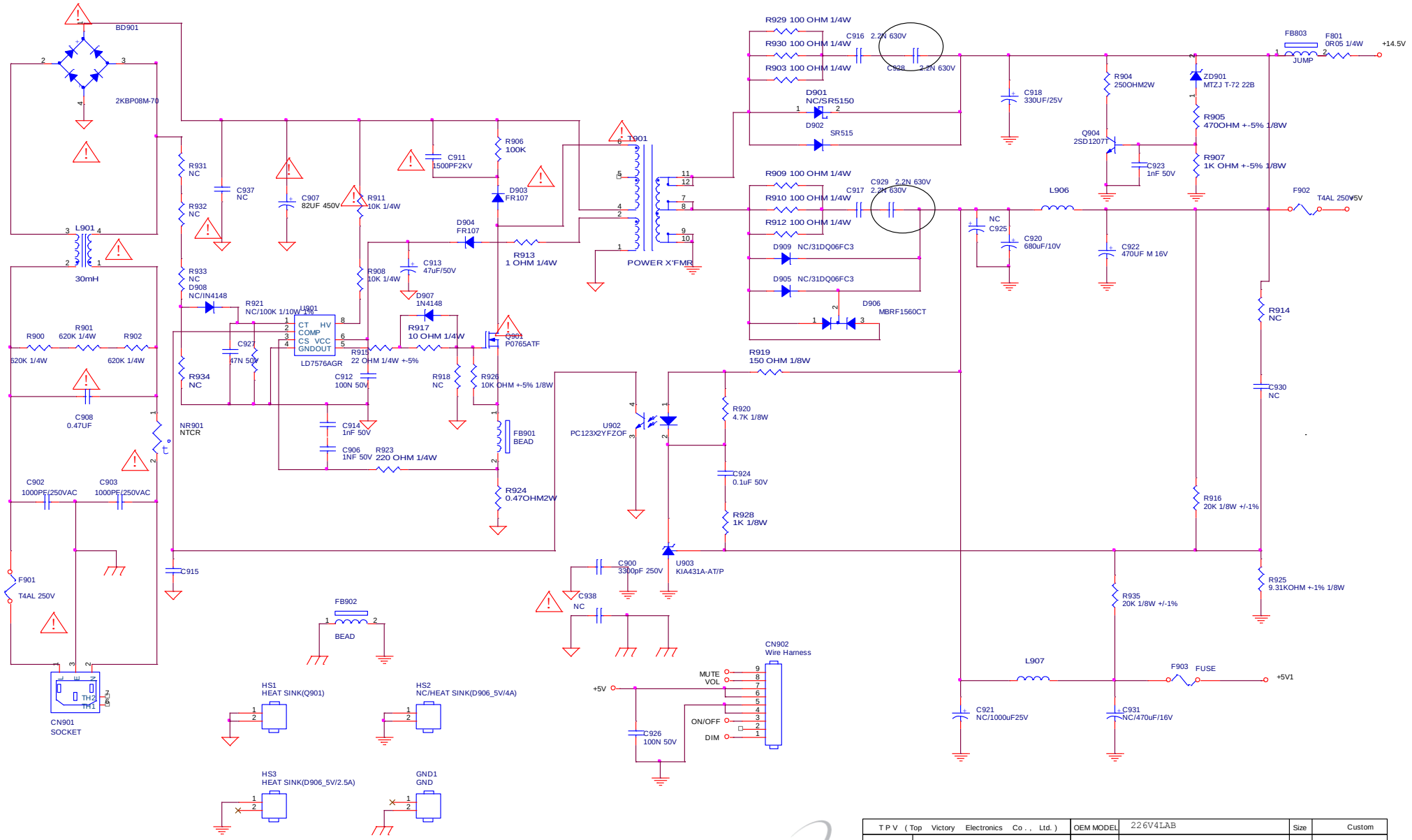
T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	AOC E960SWDA/SDA	Size	A
結 隔 瓜 綑 腹	G5270-M01-000-0040-7-120710	TPV MODEL	DUAL	Rev	1
Key Component	LVDS PANEL I/O	PCB NAME	715G5270M010000040	称 爹	<称爹>
Date	Wednesday, July 11, 2012	Sheet	6 of 7		



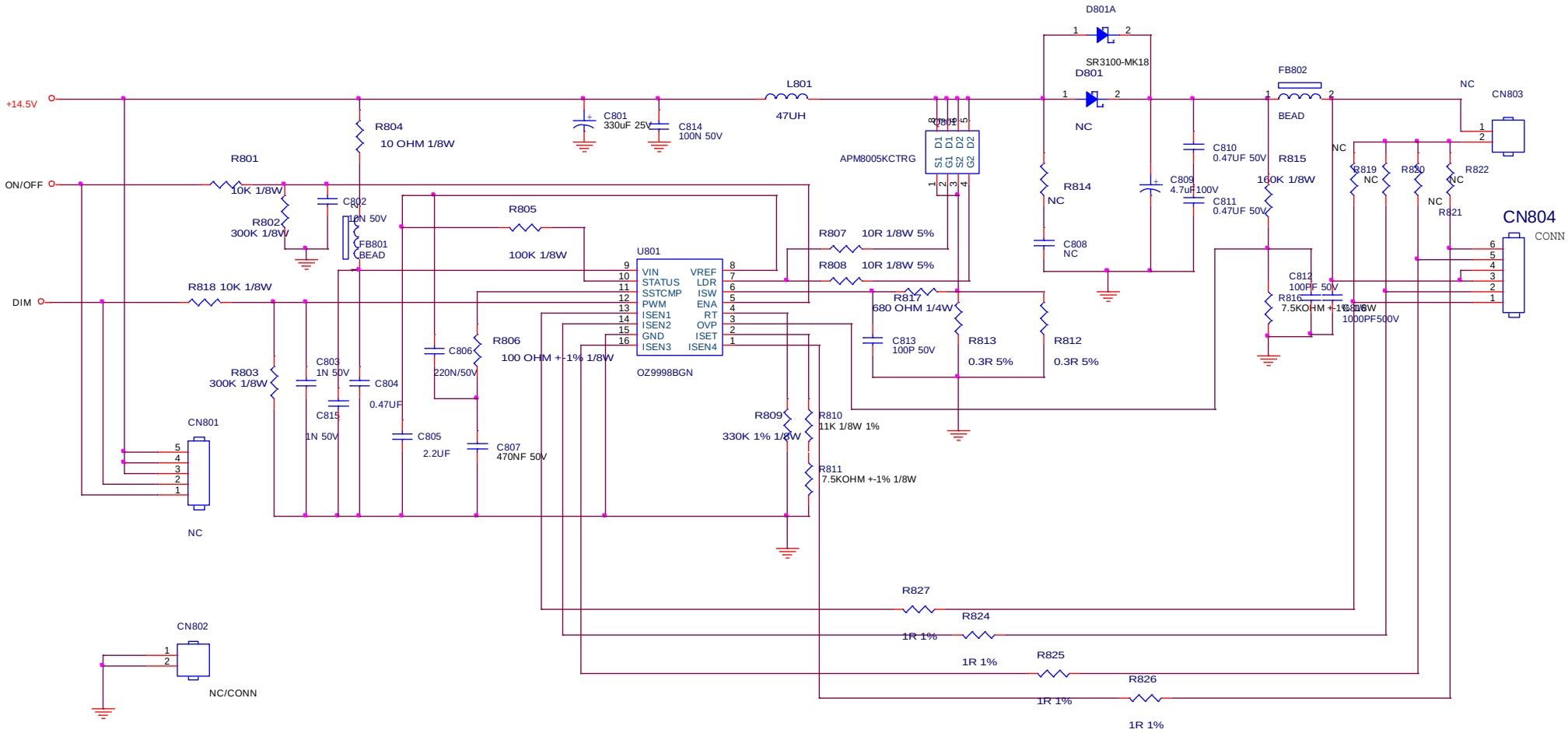
<Variant Name>

T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	AOC E960SWDA/SDA	Size	B
結 隔 瓜 銅 腹	G5270-M01-000-0040-7-120710	TPV MODEL	DUAL	Rev	1
Key Component	POWER	PCB NAME	715G5270M010000040	称 爹	<称爹>
Date	Wednesday, July 11, 2012	Sheet	7 of 7		

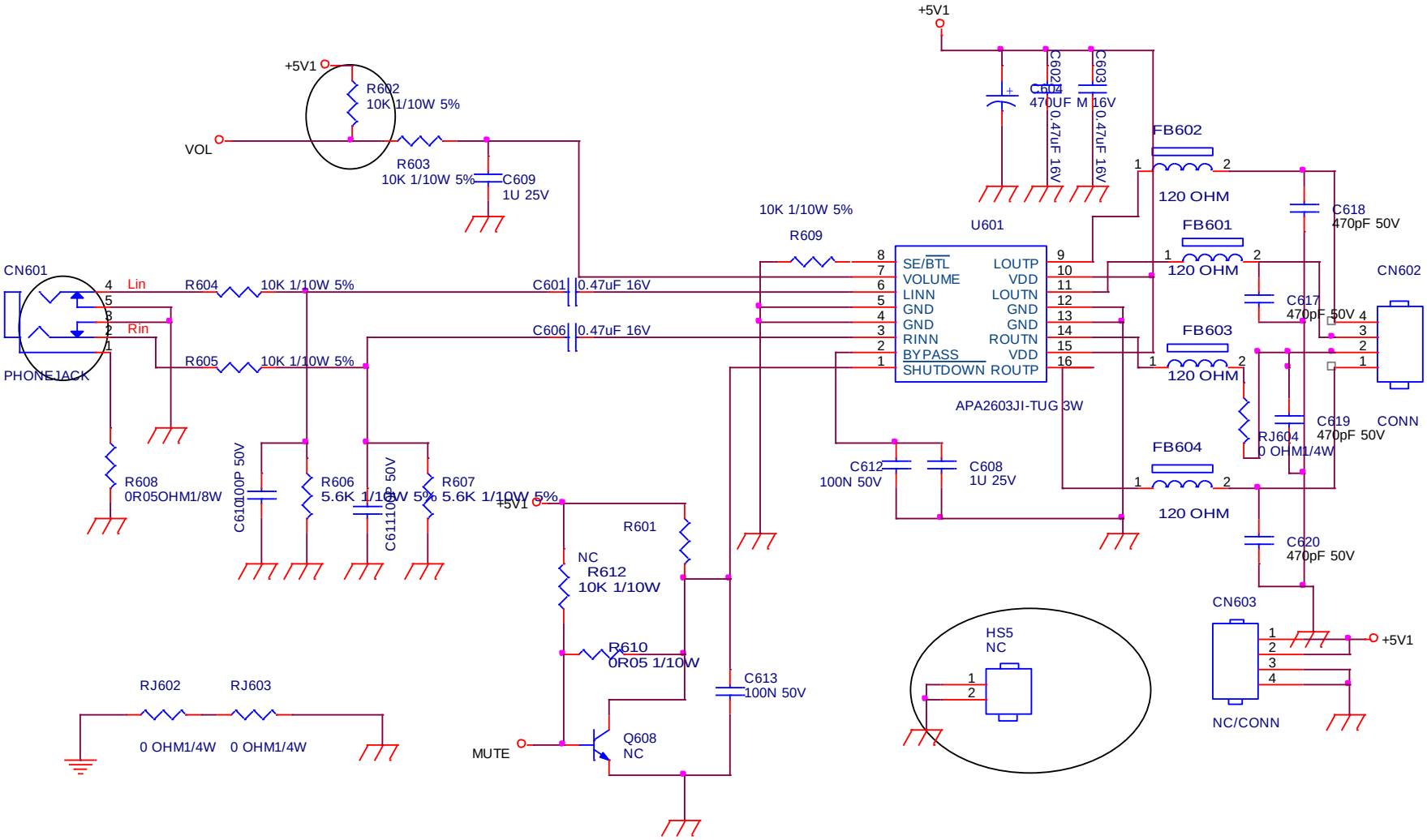
6.2 Power Board
715G4497P05000001C



TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	226V4LAB	Size	Custom
結陽瓜銅腹	G4497-P03-000-0010-15-120409	TPV MODEL	PLPCCB341MHC2	Rev	1
Key Component	01.POWER	PCB NAME	715G4497-P03-000-0010	称爹	ODM MODEL
Date	Tuesday, May 29, 2012	Sheet	1 of 3		



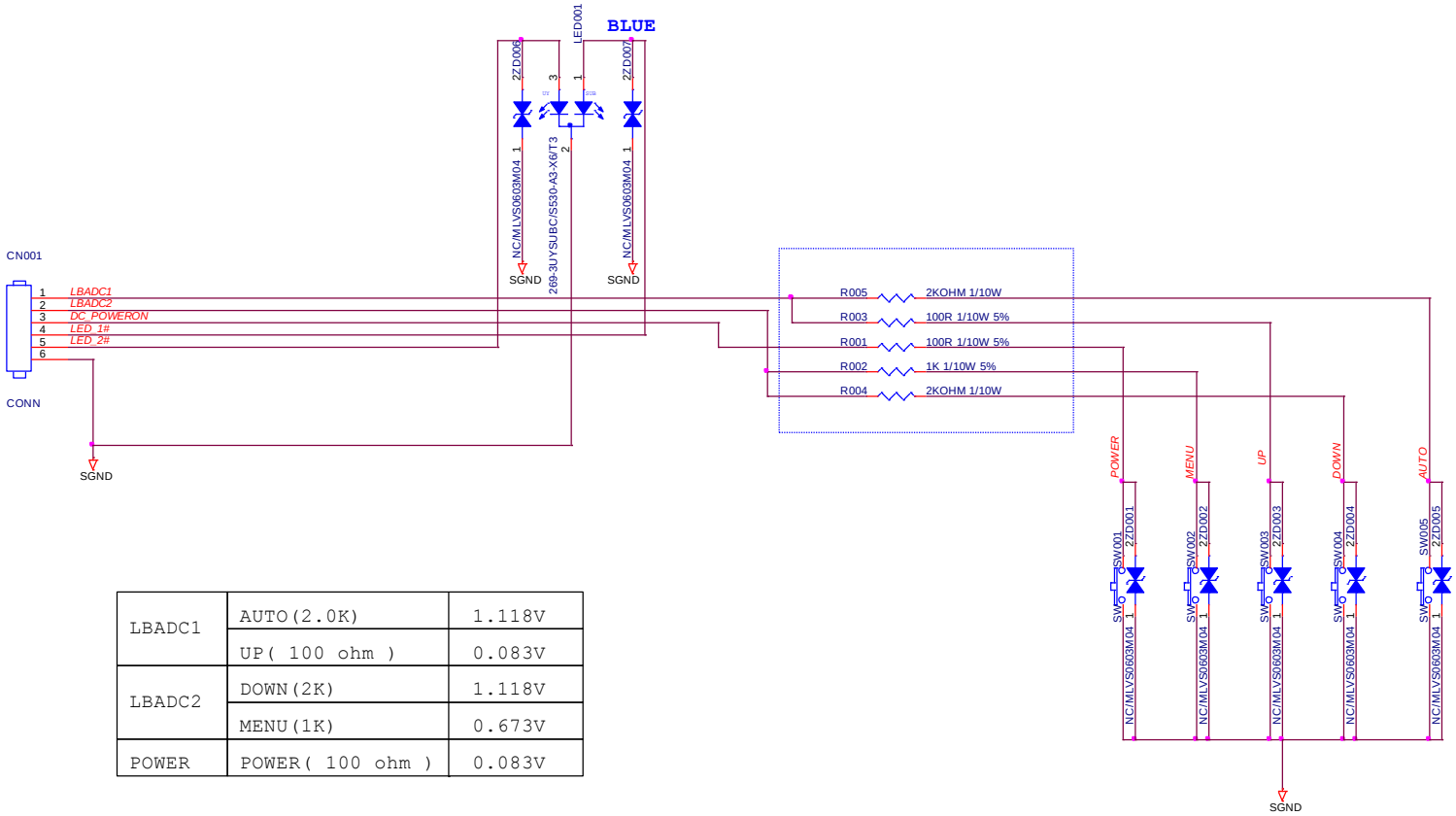
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	226V4LAB	Size	Custom
結構代號	G4497-P03-000-0010-15-120409	TPV MODEL	PLPCCB341MHC2	Rev	1
Key Component	02.CONVERTER	PCB NAME	715G4497-P03-000-0010	称爹	ODM MODEL
Date	Tuesday, May 29, 2012	Sheet	2 of 3		



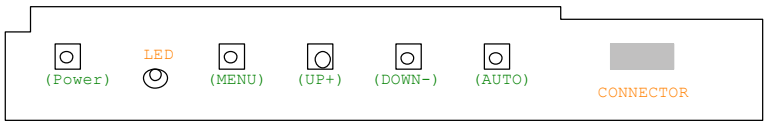
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	226V4LAB	Size	A
結構代號	G4497-P03-000-0010-15-120409	TPV MODEL	PLPCCB341MHC2	Rev	1
Key Component	03.AUDIO	PCB NAME	715G4497-P03-000-0010	称爹	ODM MODEL
Date	Monday, April 09, 2012	Sheet	2 of 3		

6.3 Key Board

715G5357K03000001M



LBADC1	AUTO(2.0K)	1.118V
	UP(100 ohm)	0.083V
LBADC2	DOWN(2K)	1.118V
	MENU(1K)	0.673V
POWER	POWER(100 ohm)	0.083V

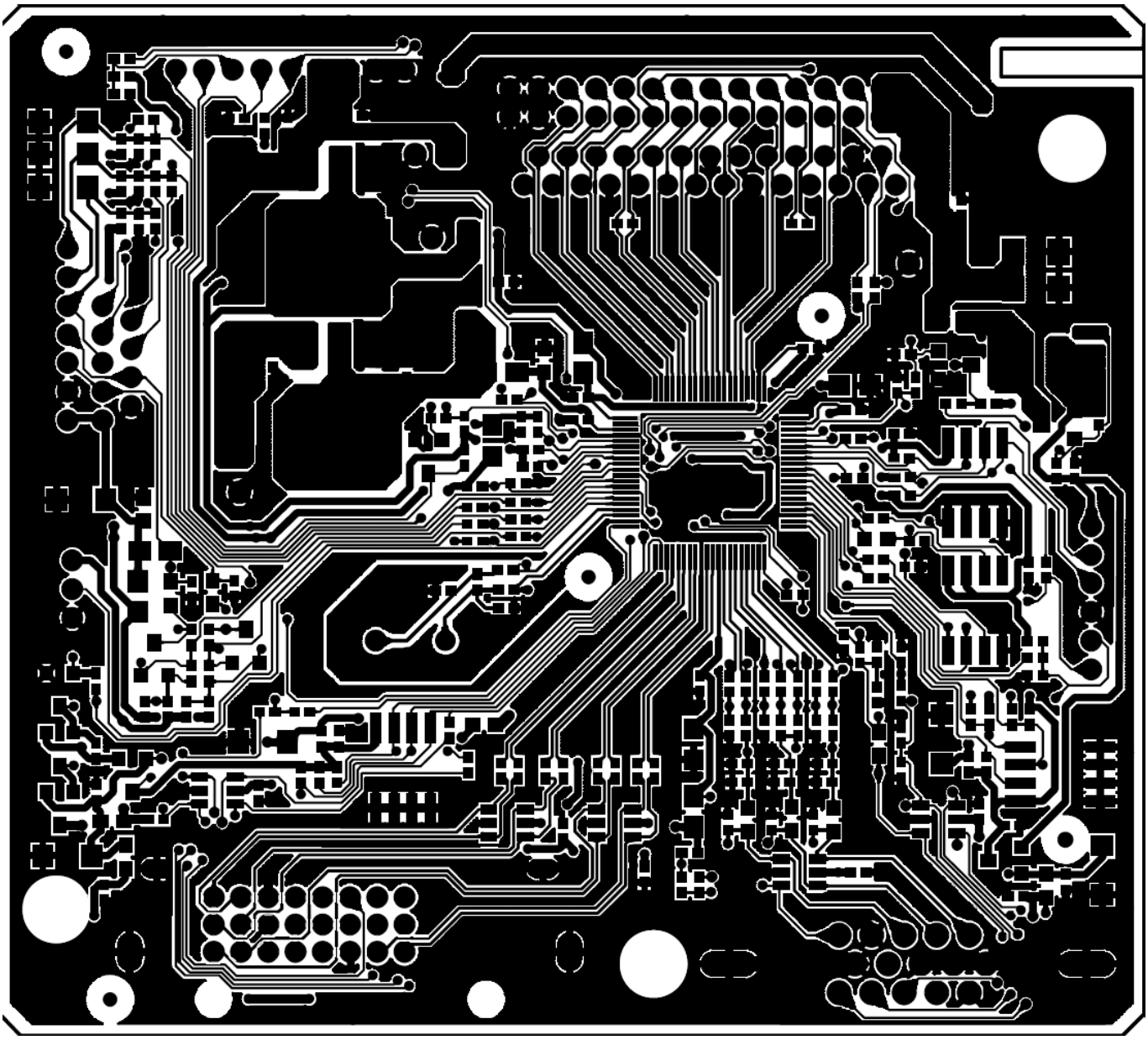


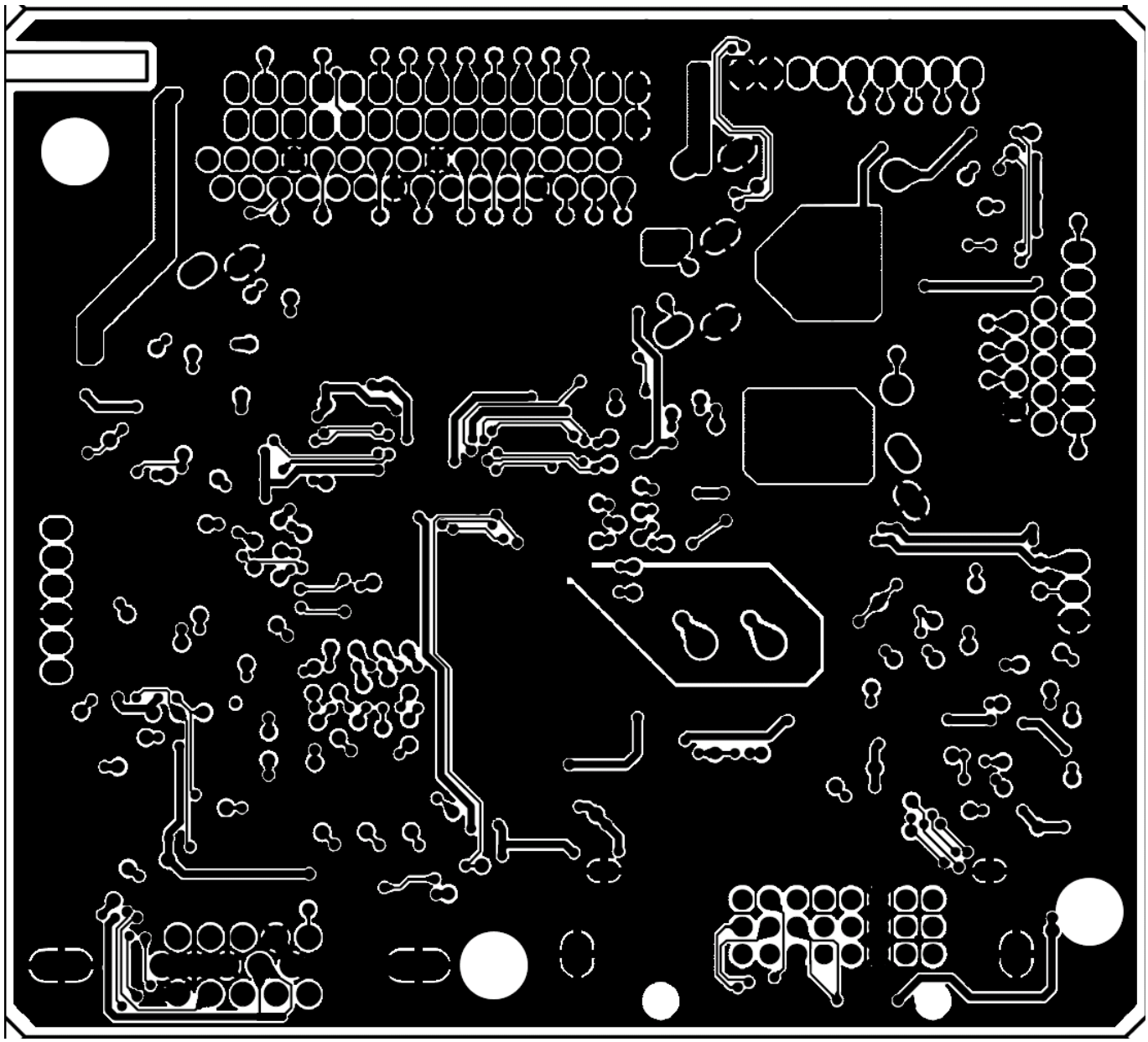
T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	AOC	Size	B
結隔瓜鋼腹	G5357-K0D-000-0010	TPV MODEL	e2460Swg	Rev	D
Key Component	2.0.key	PCB NAME	715G5357-K0D-000-0010	称爹	<称爹>
Date	Tuesday , January 17, 2012	Sheet	1 of 2		

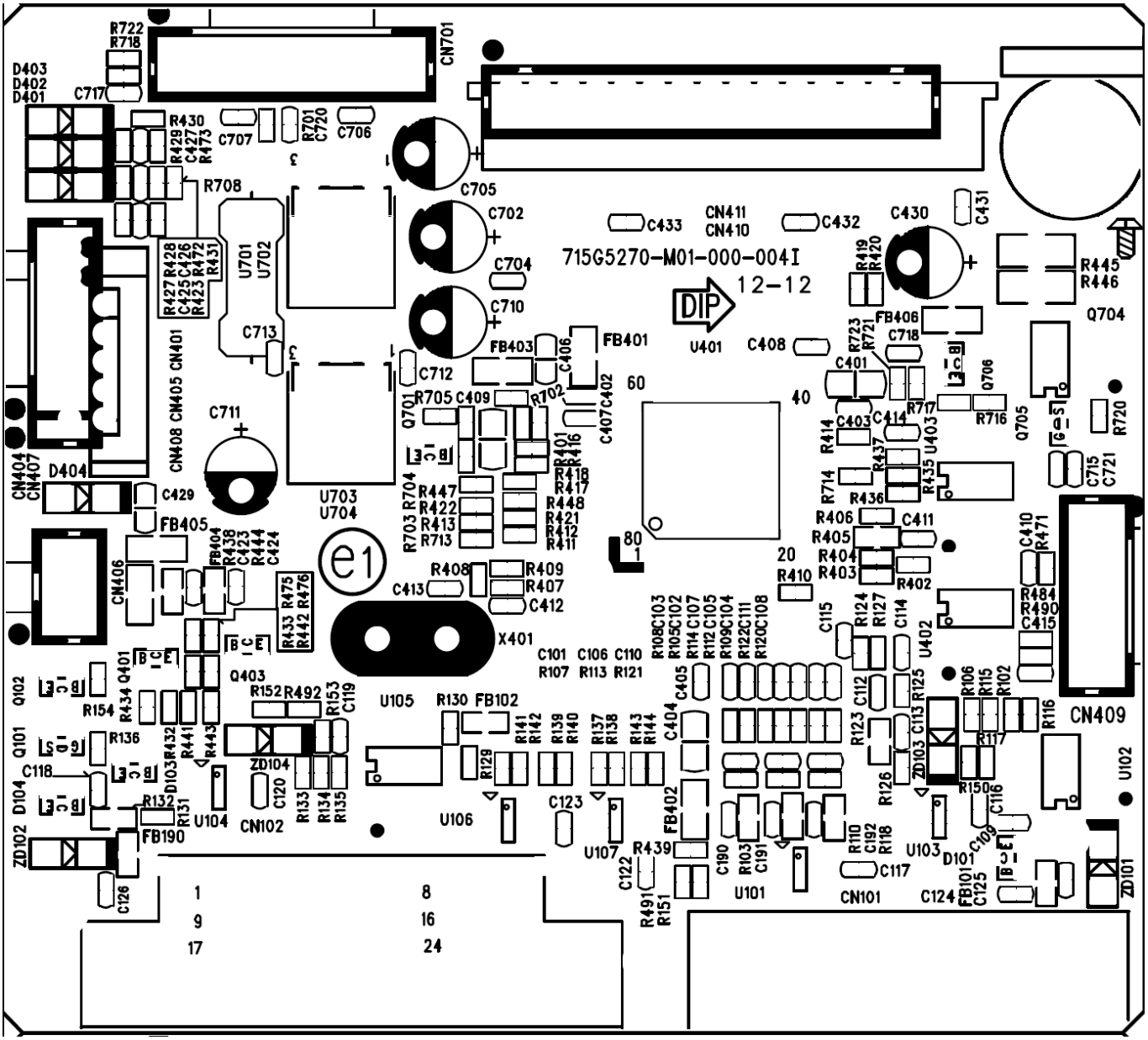
7. PCB Layout

7.1 Main Board

715G5270M01000004I

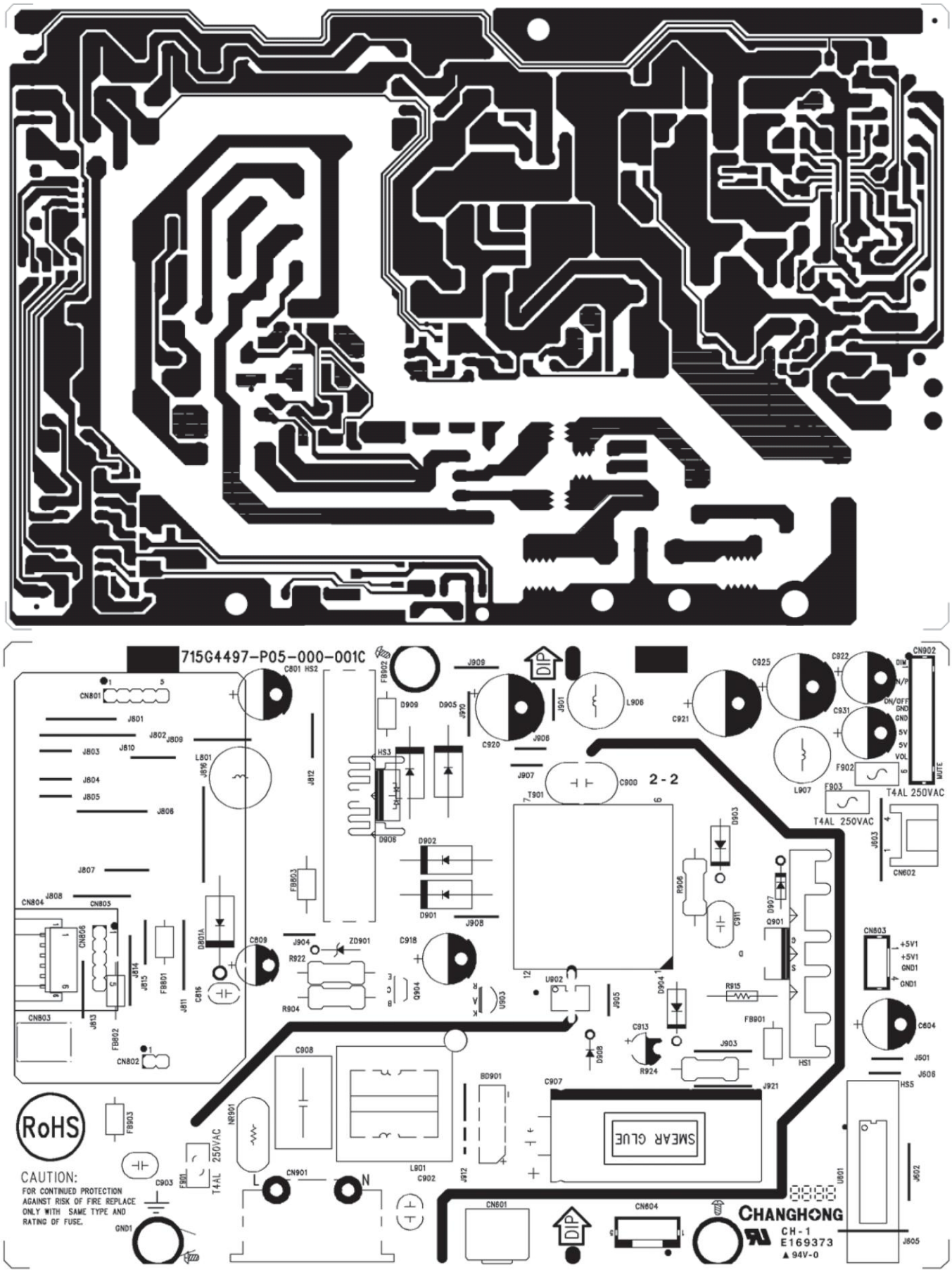


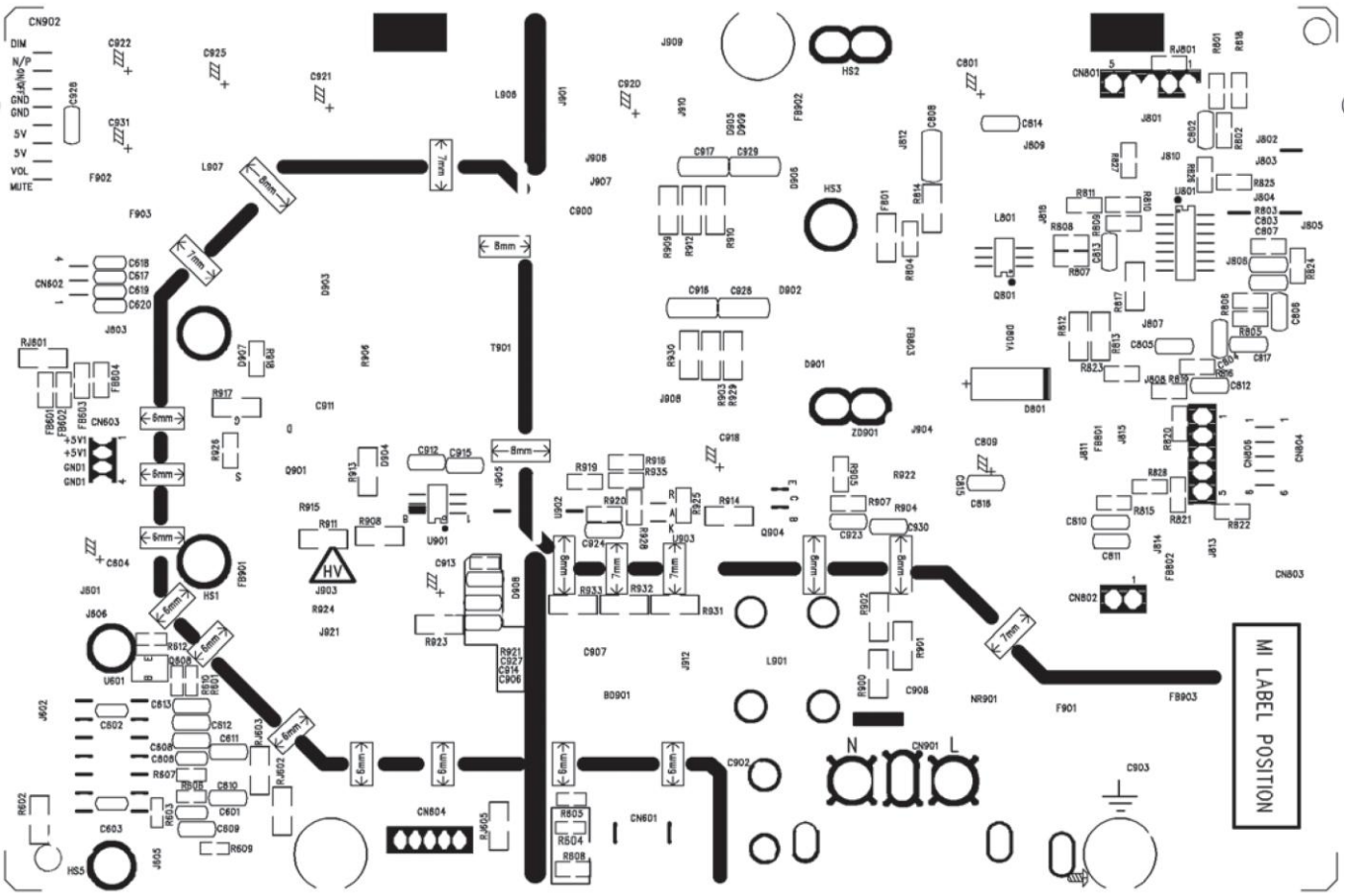



715G5270-M01-000-004I
12-12
DIP
CN701
CN409
CN101
CN102
CN401
CN405
CN408
CN404
CN407
CN406
CN411
CN410
U401
U101
U102
U103
U104
U105
U106
U107
U701
U702
U703
U704
U402
X401
Q101
Q102
Q401
Q403
Q701
Q704
Q705
Q706
D101
D103
D104
D401
D402
D403
D404
ZD101
ZD102
ZD103
ZD104
FB102
FB190
FB401
FB402
FB403
FB404
FB405
FB406
1
9
17
8
16
24
60
40
80
20

7.2 Power Board

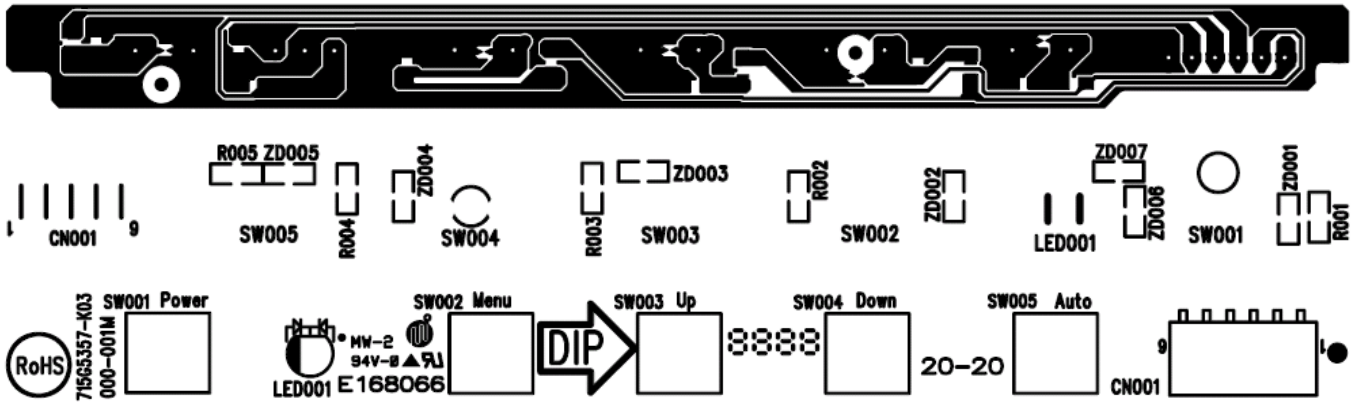
715G4497P05000001C




CN902
DIM
N/P
GND
GND
5V
5V
VOL
MUTE
HV
N
L
MI LABEL POSITION

7.3 Key Board

715G5357K03000001M



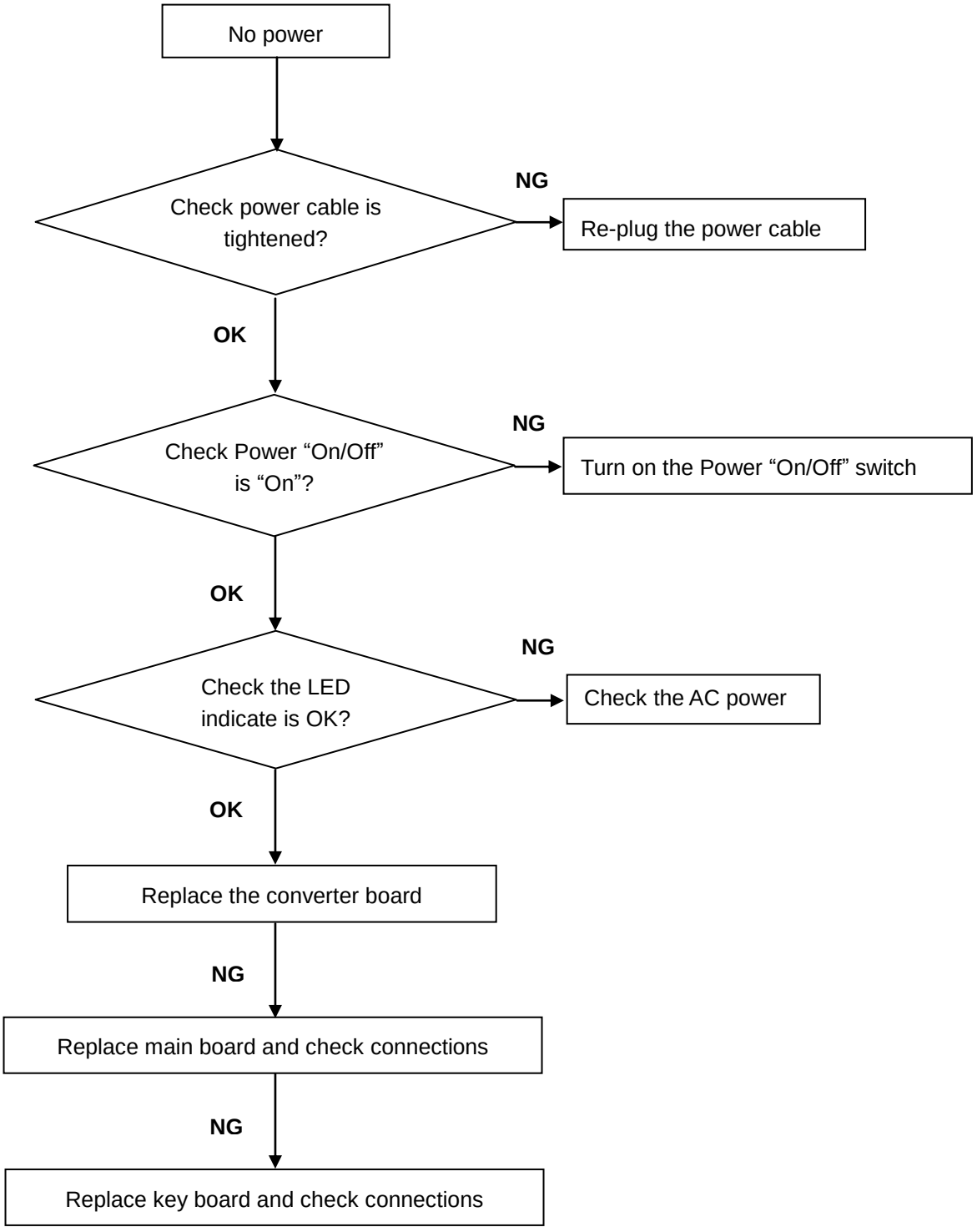
8. Maintainability

8.1 Equipments and Tools Requirement

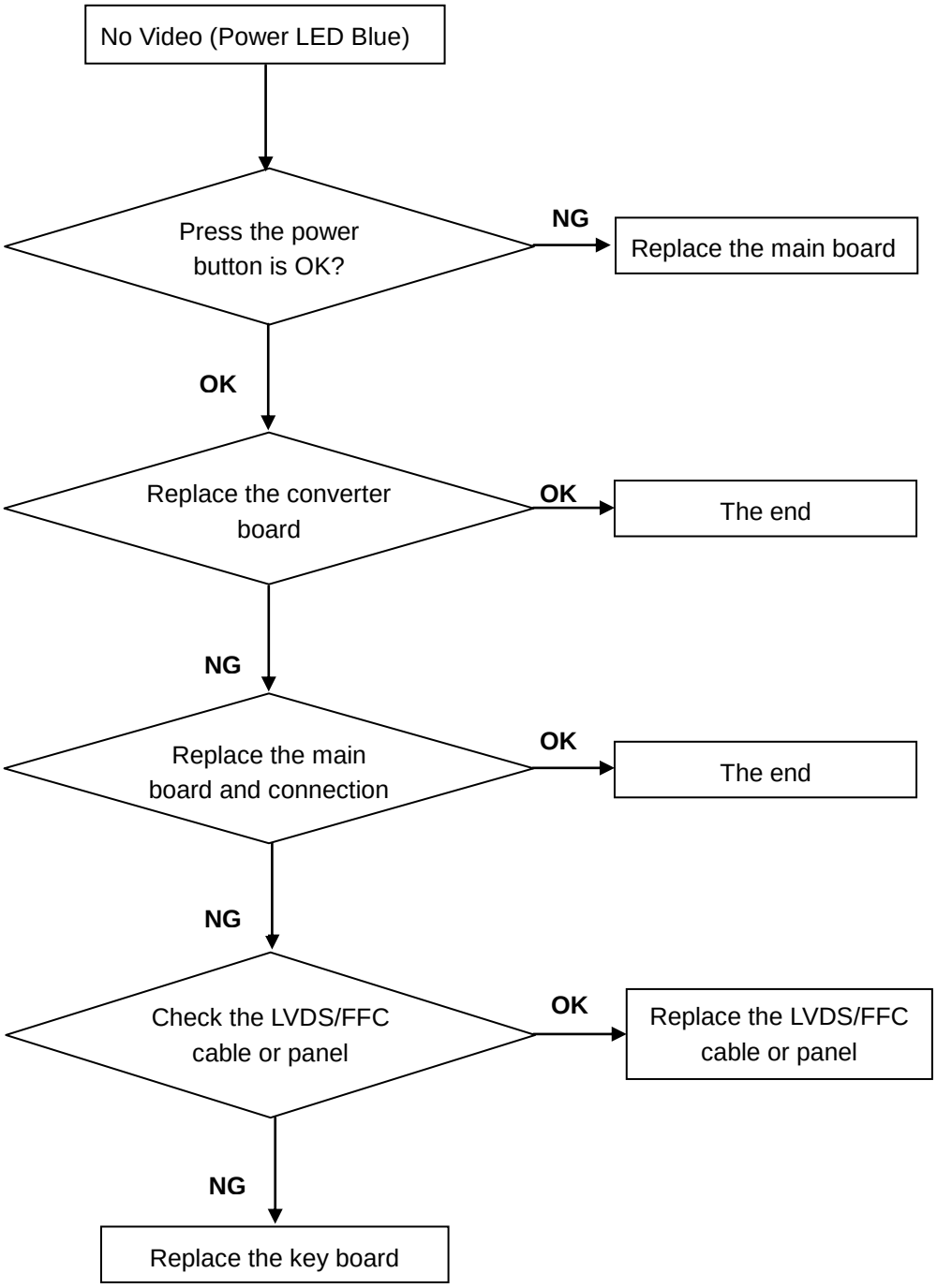
1. Voltmeter.
2. Oscilloscope.
3. Pattern Generator.
4. DDC Tool with an IBM Compatible Computer.
5. Alignment Tool.
6. LCD Color Analyzer.
7. Service Manual.
8. User Manual.

8.2 Trouble Shooting

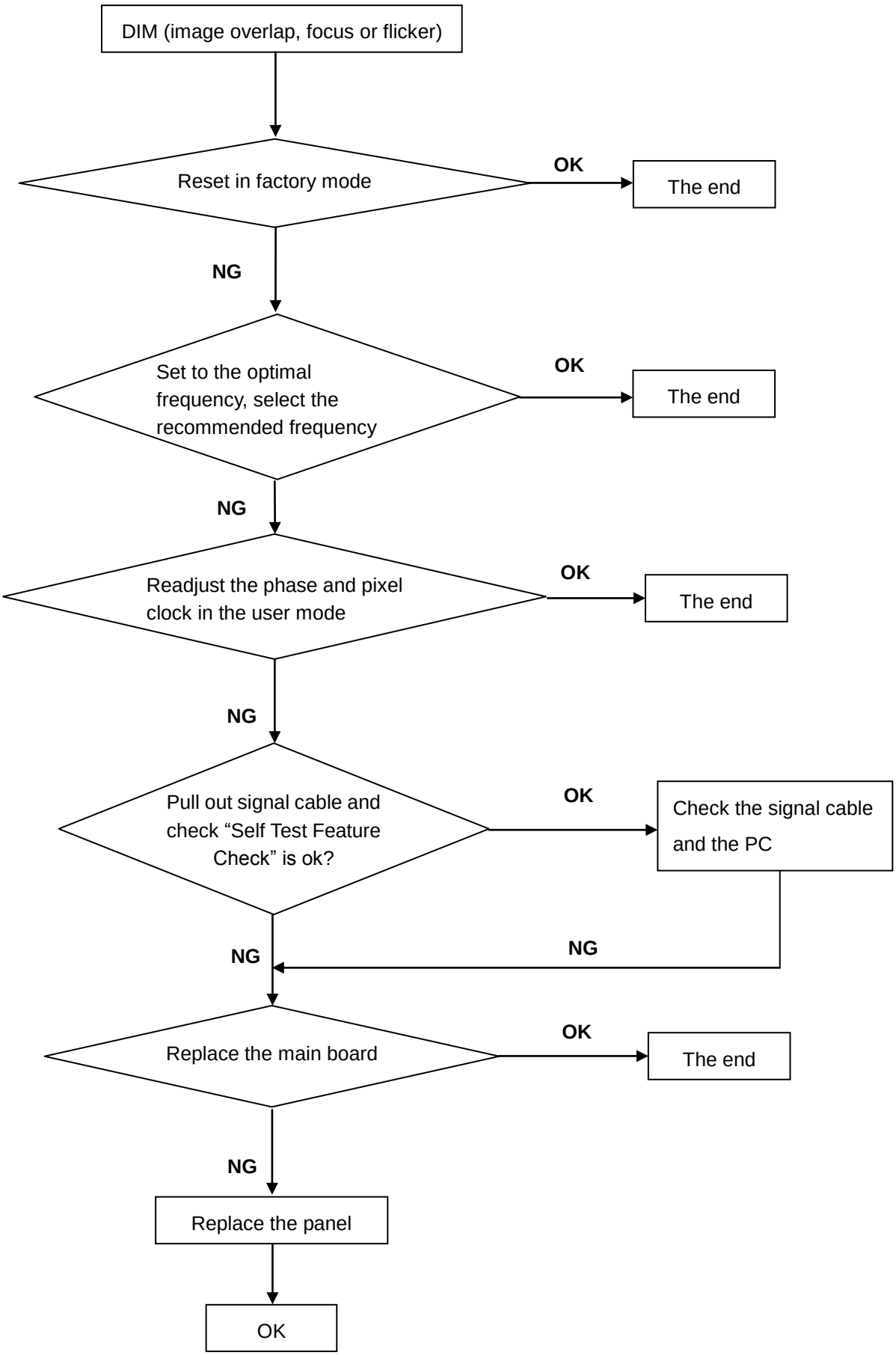
1. No Power



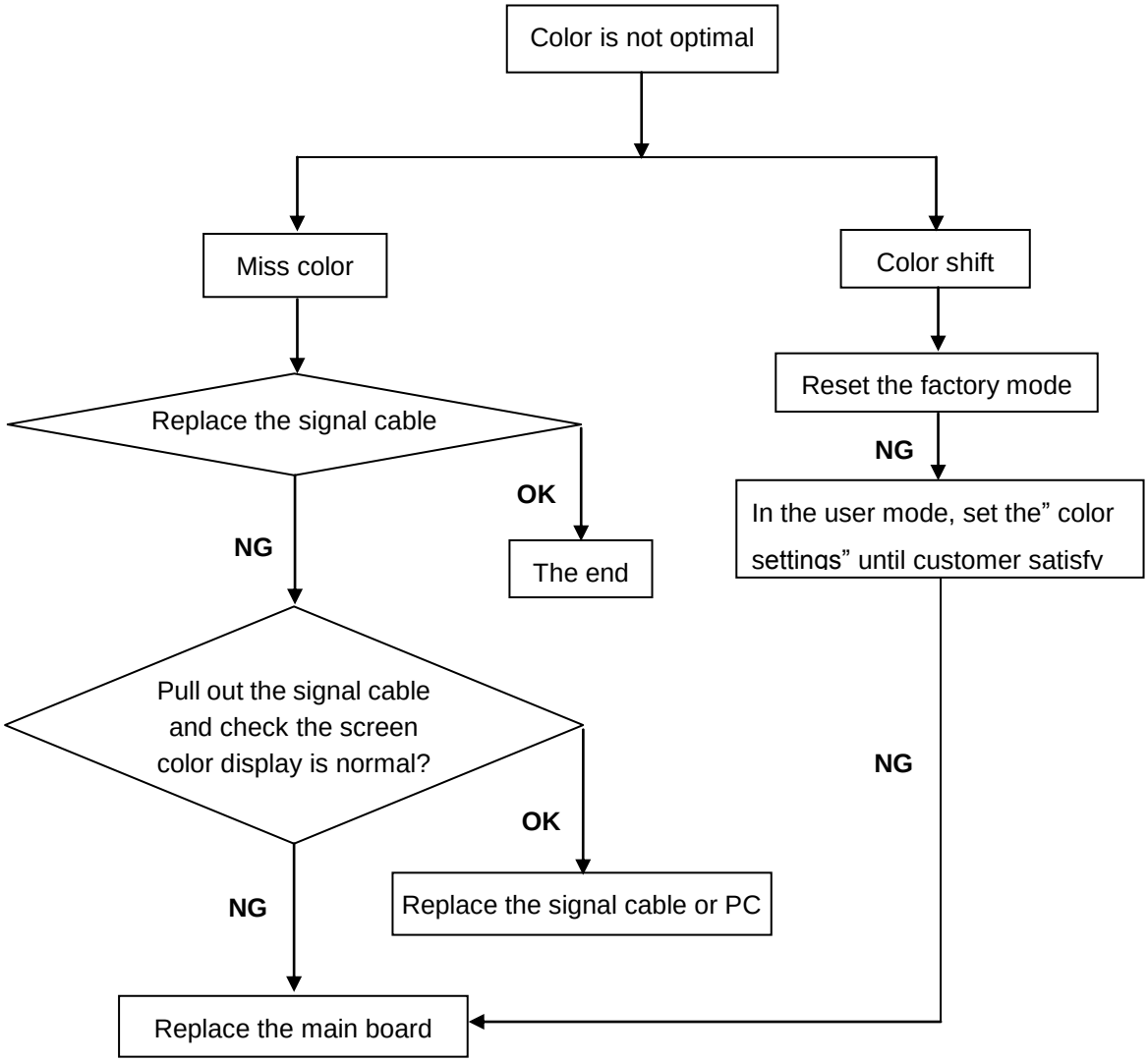
2. No Video (Power LED Blue)



3. DIM


DIM (image overlap, focus or flicker)
Reset in factory mode
OK
The end
NG
Set to the optimal frequency, select the recommended frequency
OK
The end
NG
Readjust the phase and pixel clock in the user mode
OK
The end
NG
Pull out signal cable and check “Self Test Feature Check” is ok?
OK
Check the signal cable and the PC
NG
NG
Replace the main board
OK
The end
NG
Replace the panel
OK

4. Color is not optimal



9. White- Balance, Luminance Adjustment

Approximately 30 minutes should be allowed for warm up before proceeding white balance adjustment.

How to setting MEM channel you can reference to chroma 7120 user guide or simpl use “SC” key and “NEXT” Key to modify xyY value and use “ID” key to modify the TEXT description Following is the procedure to do white-balance adjust .

2. Setting the color temp. you want

A. MEM.CHANNEL 3 Warm (6500K):

Warm color temp. parameter is x = 313 ±20, y = 329 ±20

B. MEM.CHANNEL 4 Normal (7300K):

Normal color temp. parameter is x = 301 ±20, y = 317 ±20

C. MEM.CHANNEL 9 Cool (9300K):

Cool color temp. parameter is x = 283 ±20, y = 297 ±20

D. MEM.CHANNEL 10 (sRGB color):

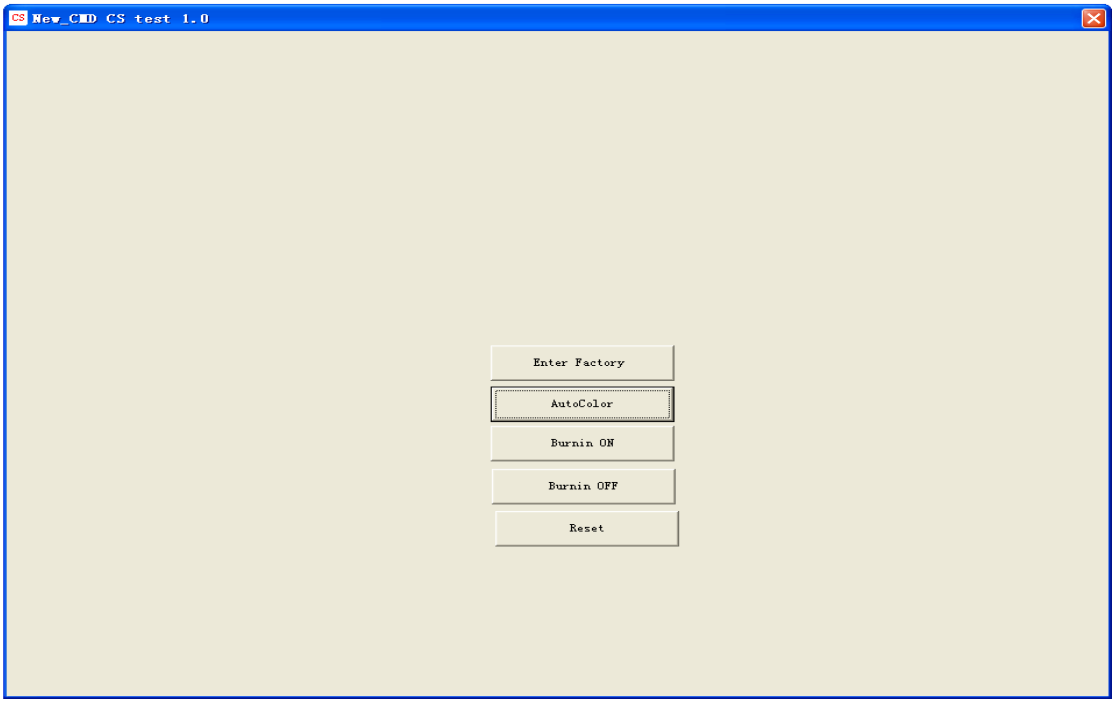
sRGB color temp. parameter is x = 313 ±20, y = 329 ±20

3. Enter into the factory mode

A. USE the tool 

, double-click the icon 

and choose”Enter Factory” You will enter into the factory mode



B. Press the MENU button,Pull out the power cord, then plug the power cord. Then the factory OSD will be at the left top of the panel.

4. Gain adjustment:

Move cursor to “-F-” and press MENU key

A. Adjust Warm (6500K) color-temperature

1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM.channel to Channel 3 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x = 313 ±20, y = 329 ±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

B. Adjust Normal (7300K) color-temperature

1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM.channel to Channel 4 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x = 301 ±20, y = 317 ±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

C. Adjust Cool (9300K) color-temperature

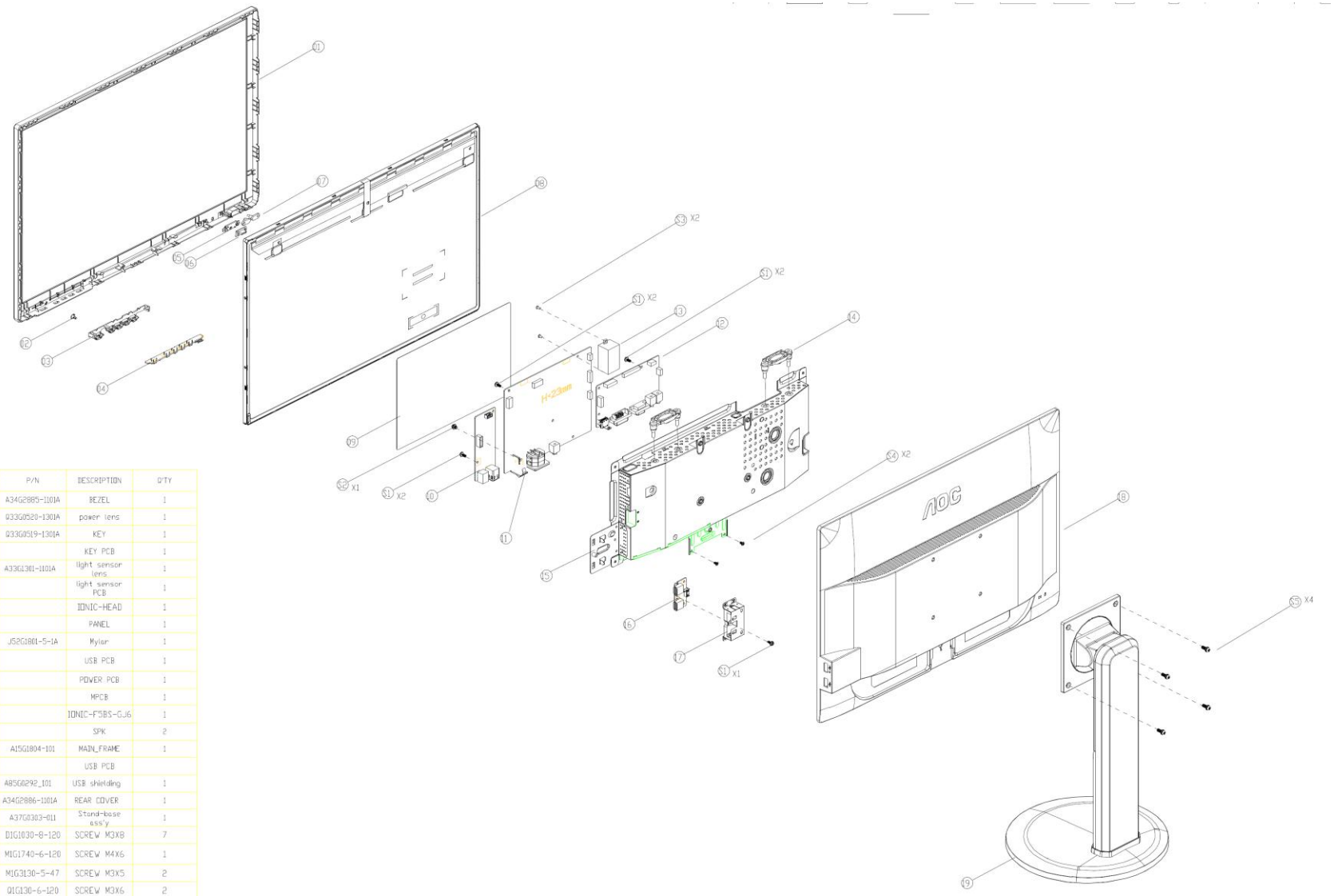
1. Switch the Chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM. Channel to Channel 9 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x = 283 ±20, y = 297 ±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reached the value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

D. Adjust sRGB color-temperature

1. Switch the chroma-7120 to **RGB-Mode** (with press “MODE” button)
2. Switch the MEM.channel to Channel 10 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x = 313 ±20, y = 329 ±20
4. Adjust the RED on factory window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on factory window until chroma 7120 indicator reachedthe value G=100
6. Adjust the BLUE on factory window until chroma 7120 indicator reached the value B=100
7. Repeat above procedure (item 4, 5, 6) until chroma 7120 RGB value meet the tolerance =100±2

E. Turn the Power-button off to quit from factory mode.

10. Monitor Exploded View



ITEM	P/N	DESCRIPTION	Q'TY
1	A34G2885-1101A	BEZEL	1
2	233G0520-1301A	power lens	1
3	233G0519-1301A	KEY	1
4		KEY PCB	1
5	A33G1301-1101A	light sensor lens	1
6		light sensor PCB	1
7		IONIC-HEAD	1
8		PANEL	1
9	J52G1801-5-1A	Mylar	1
10		USB PCB	1
11		POWER PCB	1
12		MPCB	1
13		IONIC-F3BS-GJ6	1
14		SPK	2
15	A15G1804-101	MAIN_FRAME	1
16		USB PCB	
17	A85G6292_101	USB shielding	1
18	A34G2886-1101A	REAR COVER	1
19	A37G0303-011	Stand-base ass'y	1
S1	D1G1030-8-120	SCREW M3X8	7
S2	M1G1740-6-120	SCREW M4X6	1
S3	M1G3130-5-47	SCREW M3X5	2
S4	Q1G130-6-120	SCREW M3X6	2
S5	AM1G1740-10-47	SCREW M4X12	4

11. BOM List

Note: The parts information listed below are for reference only, and are subject to change without notice. Please go to http://cs.tpv.com.cn/hello1.asp for the latest information.

T9CMUF7BBGACDNE

Location	Part No.	Description	Remark
	040G 58162435A	MANUAL P/N LABEL	
	052G 2191 A	PAPER TAPE	
HDCP-SMT	070GHDCP500HDC	HDCP CODE	
E08904	089G 17356G580	AUDIO CABLE 1.8M without PE bag	
E08902	089G 728HAA DB	D-SUB CABLE 1800mm	
E08903	089G1748HAA AC	DVI CABLE 1800MM	
ECN403	089G179J30N 22	FFC CABLE 30P 150mm 1.0MM	
E08901	089G404A18N HL	AC POWER CORD 1800 for Europe	
ECN804	095G8014 6DE45	HARNESS 6P(CI1406)-6P(2008) 140	
	0D1G1030 6120	screw	
	0M1G1140 6120	screw	
SP01	378G0025518YAB	SPEAKER 4 OHM 2.5W 40X20 50mm NO	
ECNSP01	395G801404W633	HARNESS 4P(2008)-2P+2P 60+160	
	708GA03301SH01	40(1890)-SLIP SHEET	
E750	750GBM195FGK13N000	LCD M195FGE-L20 C1 NH CMI	
	AM1G1740 10125	SCREW	
	AM1G1740 10225 CR3	SCREW	
	H15G00746030GH	MAINFRAME	
	H40G 001624 1A	CARTON LABEL BARCODE 1	
	H40G 45762413B	P/N LABEL FOR BASE	
	H40G020N61554A	RATING LABEL E2060SwD EU	
	H44GA0331010DJ	CUSHION	
	H44GA0332010DJ	CUSHION	
	H44GA03361501A00BC	ARTWORK CARTON E2060SW WW	
	H70G22C161503D	CD MANUAL 60th	
	KEPCCHA6	KEY BOARD	
	PLPCC9311MHD1	ADAPTER BOARD	
	Q33G0519ABJ 1S0130	KEY	
	Q33G0520 1 1C0100	LENS_POWER	
	Q34G7495ABJ 4S0130	REAR_COVER	
	Q34G7498ABJ 2S0100	STAND	
	Q34G7512ABJ 1S0130	BASE	
	Q34G7631AEDA1S0101	BEZEL	
	Q37G02490150ML	HINGE ASS'Y	
	Q45G8801M08A0100BX	MANUAL PE BAG	

	Q45G990161940500BX	PROTECT BAG	
M05203	Q52G100204500A00HB	AL FOIL	
M05202	Q52G100204500A00HB	AL FOIL	
M05201	Q52G100204500A00HB	AL FOIL	
	Q52G1801MNT170AFJY	INSULATING SHEET	
	H40G000261553A	TCO'05 EPA LABEL	
	756GHCCB0BV0030001	MAIN BOARD-CBPCCUFA1H1	
SMTCC-U402	100GAMMA006W11	MCU ASSY-056G2233501	
CN404	033G3802 6B Y L	WAFER	
CN701	033G3802 9B Y L	CONN 2.0 9P	
CN410	033G801930F CH JS	FFC CONN 1.0mm 30P R/A 34mm 6.3mm	
CN101	088G 35315F XH	D-SUB 15PIN VERTICAL CONN WITH SCREW	
CN102	088G 35424FXNH	DVI CONN WITH SCREW 24P R/A	
X401	093G 22 53CEC	CRYSTAL S-F-14.31818M-32-3030-2085-30	
	709G52700HM001	COMSUMPTIVE ASSY	
	H40G 45762429A	LABEL	
LED001	381G00122YG0GP	LED yellow/green GP32032M/P310-ZY-30	
CN001	395G820H06D539	HARNESS 6P(SANW)-6P(2008) 280mm	
	709G53570HM001	COMSUMPTIVE ASSY	
GND1	009G6005 1	GND TERMINAL	
U902	056G 139 9	IC EL817M(X) photocoupler DIP-4	
U601	056G 616 85	AUDIO APA2603JI-TUG 3W DIP-16	
NR901	061G 58809MEN	RST NTCR 8OHM +/20%/NMM01 4A XIANZHENG	
C908	063G107K334 6S	CAP X2 330NF 10% 275V BULK (B)	
C907	067G 40Z10115H	EC 100UF 20% 450V 18*35	
L901	073G 174 65 H2	LINE FILTER 30mH MIN	
L907	073G 253 91 V1	CHOKE COIL 1.1UH 30% 3LFDR0810-1R0K, HF	
L906	073G 253 91 V1	CHOKE COIL 1.1UH 30% 3LFDR0810-1R0K, HF	
CN901	087G 501 32 HC	AC SOCKET 3P DB-14-05 R/A	
CN601	088G 30214K DC	PHONE JACK 5P GREEN -	
BD901	093G 50460519	BRIDGE KBP206G X0 2A 800V KBP 80A	
D902	093G 60322	SCHOTTKY SR5150-MK23 5A 150V D0-27	
D901	093G 60322	SCHOTTKY SR5150-MK23 5A 150V D0-27	
D801A	093G 60924	DIODE SR510-22 DO-201AD	
CN902	095G 825 9D549	HARNESS 9P(SCN)-9P(2008) 100MM	
CN602	311GW200A04ABX	WAFER 2.0mm 4P	
CN804	311GW200A06ABX	WAFER 2.0mm 6P	
L801	373G0253214DN2	BOOST CHOKE 47UH 10% 2A --	
	705GH93043	D906 ASS'Y	
	705GHC57029	--	

	709G4497 HM001	CONSUMPTIVE ASS'Y	
	H40G 45762429A	LABEL	
T901	S80GL22T3V6	X'FMR 490UH 7% 4UH EER28 --	
	Q55G 100625	TIN STICK_LOW ARGENTUM	
C430	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C705	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
C702	067G 3051013PB	EC 105C 100uF M 16V 5*11mm JH CD263	
R003	061G0603101 JT	RST CHIP 100R 1/10W 5% TZAI YUAN	
R001	061G0603101 JT	RST CHIP 100R 1/10W 5% TZAI YUAN	
R002	061G0603102 JT	RST CHIP 1K 1/10W 5% TZAI YUAN	
R004	061G0603202 JT	RST 0603 2K 5% 1/10W	
R005	061G0603202 JT	RST 0603 2K 5% 1/10W	
ZD007	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD006	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD004	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD005	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD002	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD001	093G 64 59 SU	ESD MLVS0603M04 0603	
ZD003	093G 64 59 SU	ESD MLVS0603M04 0603	
HS3	090G6084 1 GP	HEAT SINK	
	0M1G 930 8120	SCREW 3x8	
D906	093G1506 2	SCHOTTKY FMW-2156 15A 60V TO-220	
HS1	090G6064 1	HEAT SINK	
	0M1G 930 8120	SCREW 3x8	
Q901	357G0667941A01	MOSFET P0765GTF 7 650 TO-220F	
	055G 23524	WELDING FLUX WITHOUT PB	
	Q51G 6 4509	GLUE_RTV	
	Q55G 100625	TIN STICK_LOW ARGENTUM	
U901	056G 379529	AC/DC CONVERTER IC LD7576AGR SOP-7	
Q801	057G 763 92	FET P8008HV 4A/80V SOP-8	
R610	061G0603000 JF	RST CHIPR MAX 0R05 1/10W FENGHUA	
R612	061G0603103 JF	RST CHIPR 10K OHM +-5% 1/10W FENGHUA	
R604	061G0603103 JT	RST CHIP 10K 1/10W 5% TZAI YUAN	
R605	061G0603103 JT	RST CHIP 10K 1/10W 5% TZAI YUAN	
R609	061G0603103 JT	RST CHIP 10K 1/10W 5% TZAI YUAN	
R603	061G0603103 JT	RST CHIP 10K 1/10W 5% TZAI YUAN	
R607	061G0603562 JF	RST 0603 5.6K 5% 1/10W	
R606	061G0603562 JF	RST 0603 5.6K 5% 1/10W	
R828	061G0805000 JF	RST CHIPR 0 OHM +-5% 1/8W FENGHUA	
RJ801	061G0805000 JF	RST CHIPR 0 OHM +-5% 1/8W FENGHUA	

R608	061G0805000 JF	RST CHIPR 0 OHM +-5% 1/8W FENGHUA	
R818	061G0805000 JF	RST CHIPR 0 OHM +-5% 1/8W FENGHUA	
R804	061G0805100 JF	RST CHIPR 10 OHM +-5% 1/8W FENGHUA	
R928	061G08051001FF	RST CHIPR 1KOHM +-1% 1/8W FENGHUA	
R827	061G08051008FT	RST 0805 1R 1% 1/8W	
R824	061G08051008FT	RST 0805 1R 1% 1/8W	
R825	061G08051008FT	RST 0805 1R 1% 1/8W	
R826	061G08051008FT	RST 0805 1R 1% 1/8W	
R907	061G0805102 JT	RST CHIPR 1K OHM +- 5% 1/8W TZAI YUAN	
R801	061G0805103 JF	RST CHIPR 10K OHM +-5% 1/8W FENGHUA	
R926	061G0805103 JT	RST 0805 10K 5% 1/8W	
R805	061G0805104 JY	RST CHIPR 100KOHM 1/8W YAGEO	
R808	061G0805109 JF	RST CHIPR 1 OHM +- 5% 1/8W FENGHUA	
R807	061G0805109 JF	RST CHIPR 1 OHM +- 5% 1/8W FENGHUA	
R810	061G08051202FT	RST CHIP 12K 1/8W 1%	
R919	061G08051500FT	RST CHIPR 150OHM +-1% 1/8W TZAIYUAN	
R815	061G0805164 JF	RST 0805 160K 5% 1/8W	
R935	061G08052002FT	RST CHIP 20K 1/8W 1%	
R916	061G08052002FT	RST CHIP 20K 1/8W 1%	
R809	061G08052203FF	RST CHIPR 220KOHM +-1% 1/8W FENGHUA	
R802	061G0805304 JF	RST CHIPR 300KOHM +-5% 1/8W FENGHUA	
R920	061G08054701FF	RST CHIPR 4.7KOHM +-1% 1/8W FENGHUA	
R905	061G0805471 JT	RST CHIPR 470OHM +-5% 1/8W TZAI YUAN	
R811	061G08055101FT	RST CHIP 5K1 1/8W 1%	
R806	061G0805512 JF	RST CHIPR 5.1KOHM +-5% 1/8W FENGHUA	
R816	061G08056801FF	RST CHIPR 6.8KOHM +-1% 1/8W FENGHUA	
R925	061G08059311FF	RST CHIPR 9.31KOHM +-1% 1/8W FENGHUA	
RJ602	061G1206000 JF	RST CHIPR MAX0R05 1/4W FENGHUA	
RJ603	061G1206000 JF	RST CHIPR MAX0R05 1/4W FENGHUA	
F801	061G1206000 JT	RST CHIPR MAX0R05 1/4W TZAI YUAN	
RJ601	061G1206000 JT	RST CHIPR MAX0R05 1/4W TZAI YUAN	
R917	061G1206100 JT	RST CHIPR 10 OHM +-5% 1/4W TZAI YUAN	
R817	061G12061001FT	RST CHIP R 1Kohm +-1% 1/4W	
R909	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R929	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R910	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R903	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R930	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R912	061G1206101 JT	RST CHIPR 100 OHM +-5% 1/4W TZAI YUAN	
R911	061G1206103 JF	RST CHIPR 10KOHM +-5% 1/4W FENGHUA	

R908	061G1206103 JT	RST CHIPR 10KOHM +-5% 1/4W TZAI YUAN	
R602	061G1206103 JT	RST CHIPR 10KOHM +-5% 1/4W TZAI YUAN	
R913	061G1206109 JT	RST CHIPR 1 OHM +-5% 1/4W TZAI YUAN	
R923	061G1206221 JT	RST CHIPR 220 OHM +-5% 1/4W TZAI YUAN	
R812	061G1206308 JT	RST 1206 0.3R 5% 1/4W	
R813	061G1206308 JT	RST 1206 0.3R 5% 1/4W	
R900	061G1206624 JF	RST CHIPR 620KOHM +-5% 1/4W FENGHUA	
R901	061G1206624 JF	RST CHIPR 620KOHM +-5% 1/4W FENGHUA	
R902	061G1206624 JF	RST CHIPR 620KOHM +-5% 1/4W FENGHUA	
C619	065G060322131J F	CAP CHIP 0603 220PF J 50V NPO	
C617	065G060322131J F	CAP CHIP 0603 220PF J 50V NPO	
C620	065G060322131J F	CAP CHIP 0603 220PF J 50V NPO	
C618	065G060322131J F	CAP CHIP 0603 220PF J 50V NPO	
C606	065G060347412K Y	CAP CHIP 0.47uF 16V +/-10% X7R	
C603	065G060347412K Y	CAP CHIP 0.47uF 16V +/-10% X7R	
C601	065G060347412K Y	CAP CHIP 0.47uF 16V +/-10% X7R	
C602	065G060347412K Y	CAP CHIP 0.47uF 16V +/-10% X7R	
C813	065G080510131J Y	CAP CHIP 0805 100P 50V NP0 +/-5%	
C610	065G080510131J Y	CAP CHIP 0805 100P 50V NP0 +/-5%	
C611	065G080510131J Y	CAP CHIP 0805 100P 50V NP0 +/-5%	
C812	065G080510131J Y	CAP CHIP 0805 100P 50V NP0 +/-5%	
C923	065G080510232K F	CAP 0805 1000PF 10% 50V X7R	
C906	065G080510232K F	CAP 0805 1000PF 10% 50V X7R	
C815	065G080510232K F	CAP 0805 1000PF 10% 50V X7R	
C914	065G080510232K F	CAP 0805 1000PF 10% 50V X7R	
C802	065G080510332K F	CAP 0805 10NF K 50V X7R	
C915	065G080510332K F	CAP 0805 10NF K 50V X7R	
C814	065G080510432K A	CAP CHIP 0805 0.1UF K 50V X7R	
C926	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C924	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C613	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C612	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C912	065G080510432K Y	CAP CHIP 0805 100N 50V X7R +/-10%	
C608	065G080510522K T	CAP 0805 1UF 10% 25V X7R	
C609	065G080510522K T	CAP 0805 1UF 10% 25V X7R	
C807	065G080533332K F	CAP 0805 33NF K 50V X7R	
C927	065G080547332K F	CAP CHIP 0805 47NF K 50V X7R	
C811	065G080547432K A	CAP CHIP 0805 0.47UF K 50V X7R	
C810	065G080547432K A	CAP CHIP 0805 0.47UF K 50V X7R	
C805	065G080547432K F	0805 0.47UF K 50V X7R	

C804	065G080547432K T	CAP CHIP 0805 0.47UF K 50V X7R	
C917	065G120622272K A	CAP 1206 2.2NF 10% 500V X7R	
C928	065G120622272K A	CAP 1206 2.2NF 10% 500V X7R	
C916	065G120622272K A	CAP 1206 2.2NF 10% 500V X7R	
C929	065G120622272K A	CAP 1206 2.2NF 10% 500V X7R	
FB604	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB601	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB602	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB603	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
U801	356G0700045	LED DRIVER PF7024 S SOP-16	
	709G4497 HS001	CONSUMPTIVE ASS'Y	
SW003	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
SW004	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
SW002	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
SW005	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
SW001	077G603S AI HJ	TACT SWITCH AI 2PIN SEALED	
E715	715G5357K03000001M	KEY PCB FR1 SS 117*10*1.6MM	
C900	065G306M33233R	CAP Y1 3.3NF 20% 250V Y5U	
FB901	071G 55 29	FERRITE BEAD	
	709G4497 HA001	CONSUMPTIVE ASS'Y	
E715	715G4497P05000001C	PWR PCB FR1 CTI>600 SS 184*122*1.6	
R924	061G152M47852T SY	RST MOFR 0.47 OHM +-5% 2WS FUTABA	
J805	095G 90 23	JUMP WIRE - -	
J810	095G 90 23	JUMP WIRE - -	
D907	093G 6451652T	1N4148	
J909	095G 90 23	JUMP WIRE - -	
F902	084G 56 4 C	FUSE 4A 250V MST 4A 250V	
J813	095G 90 23	JUMP WIRE - -	
J601	095G 90 23	JUMP WIRE - -	
J804	095G 90 23	JUMP WIRE - -	
J806	095G 90 23	JUMP WIRE - -	
C902	065G306M10233R	CAP Y1 1NF 20% 250V Y5U	
C809	067G 4153309KT	EC 33UF 20% 100V 8*12 ED	
Q904	057G 530503 T	2SD1207T	
C911	065G 2K152 2T6921	CAP CER 1500pF K 2KV Y5P	
J605	095G 90 23	JUMP WIRE - -	
D904	093G 6026T52T	CTIFIER DIODE FR107	
J815	095G 90 23	JUMP WIRE - -	
FB802	071G 55 29	FERRITE BEAD	
R922	061G152M47152T SY	RST MOF 470R 5% 2W FUTABA	

U903	056G 563355	Shunt Regu TL431G-A-TA TO-92 42V 150mA	
J812	095G 90 23	JUMP WIRE - -	
R904	061G152M47152T SY	RST MOF 470R 5% 2W FUTABA	
D903	093G 6026T52T	CTIFIER DIODE FR107	
FB801	071G 55 29	FERRITE BEAD	
J903	095G 90 23	JUMP WIRE - -	
J905	095G 90 23	JUMP WIRE - -	
CN901	006G 31500	EYELET	
J809	095G 90 23	JUMP WIRE - -	
J811	095G 90 23	JUMP WIRE - -	
FB902	071G 55 29	FERRITE BEAD	
J603	095G 90 23	JUMP WIRE - -	
C920	067G 2046812KT	CAP CS 680UF 20% 10V 8*11 3900mA GP1A6	
J802	095G 90 23	JUMP WIRE - -	
FB803	071G 55 29	FERRITE BEAD	
C918	367G215X3314AT	EC 330UF 20% 25V 10*12 RF	
C903	065G306M10233R	CAP Y1 1NF 20% 250V Y5U	
J901	095G 90 23	JUMP WIRE - -	
F901	084G 56 4 C	FUSE 4A 250V MST 4A 250V	
J602	095G 90 23	JUMP WIRE - -	
ZD901	093G 3960252T	ZENER MTZJ20B 18.63-19.59V 0.5W DO-35	
F903	084G 56 4 C	FUSE 4A 250V MST 4A 250V	
J908	095G 90 23	JUMP WIRE - -	
J803	095G 90 23	JUMP WIRE - -	
C801	367G215X3314AT	EC 330UF 20% 25V 10*12 RF	
J921	095G 90 23	JUMP WIRE - -	
J906	095G 90 23	JUMP WIRE - -	
R906	061G152M10452T SY	RST MOFR 100KOHM +-5% 2WS FUTABA	
J910	095G 90 23	JUMP WIRE - -	
C913	367G215X4707AT	EC 47uF 20% 50V - 6.3*11mm RG	
C816	065G 2K102 2T6921	CAP CER 1000pF 2KV K Y5P	
J801	095G 90 23	JUMP WIRE - -	
J606	095G 90 23	JUMP WIRE - -	
C922	367G415X4713AT	EC 470uf 20% 16V 10X13 RS	
J904	095G 90 23	JUMP WIRE - -	
J907	095G 90 23	JUMP WIRE - -	
C604	367G415X4713AT	EC 470uf 20% 16V 10X13 RS	
J808	095G 90 23	JUMP WIRE - -	
J807	095G 90 23	JUMP WIRE - -	
R915	061G 17222052T TZ	RST CFR 22R 5% 1/4W	

U701	056G 563527BHF	LDO BL1117-33CX 1A 3.3V SOT-223	
U103	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U104	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U106	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U101	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U107	056G 662 52	ESD PROTECT AZC398-04S.R7G SOT23-6	
U102	056G1133 34 1	EEPROM M24C02-RMN6TP 2Kb SO-8	
U105	056G1133 34 1	EEPROM M24C02-RMN6TP 2Kb SO-8	
U402	056G2233501	FLASH MX25L2026DM1I-12G 2Mb SOP-8	
Q403	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	
Q401	057G 417517	Tra LMBT3906LT1G -200mA/-40V SOT-23 LRC	
Q706	057G 417518	TRA LMBT3904LT1G 200mA/40V SOT-23 LRC	
Q701	057G 417518	TRA LMBT3904LT1G 200mA/40V SOT-23 LRC	
Q704	057G 763 3	AO4411 SO-8 BY AOS	
R432	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R409	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R416	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R441	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R407	061G0402000 JY	RST CHIPR MAX 0R05 OHM 1/16W YAGEO	
R105	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R120	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R138	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R143	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R140	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R144	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R139	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R142	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R141	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R137	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R112	061G0402100 JF	RST CHIPR 10 OHM +-5% 1/16W FENGHUA	
R124	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R125	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R702	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R152	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R410	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R151	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R713	061G0402101 JY	RST CHIPR 100 OHM +-5% 1/16W YAGEO	
R150	061G0402102 JY	RST CHIPR 1KOHM +-5% 1/16W YAGEO	
R153	061G0402102 JY	RST CHIPR 1KOHM +-5% 1/16W YAGEO	
R422	061G0402102 JY	RST CHIPR 1KOHM +-5% 1/16W YAGEO	

R423	061G0402102 JY	RST CHIPR 1KOHM +-5% 1/16W YAGEO	
R421	061G0402102 JY	RST CHIPR 1KOHM +-5% 1/16W YAGEO	
R131	061G0402102 JY	RST CHIPR 1KOHM +-5% 1/16W YAGEO	
R716	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R703	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R401	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R412	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R413	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R704	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R402	061G0402103 JF	RST CHIPR 10KOHM +-5% 1/16W FENGHUA	
R491	061G0402104 JY	RST CHIPR 100KOHM +-5% 1/16W YAGEO	
R717	061G0402104 JY	RST CHIPR 100KOHM +-5% 1/16W YAGEO	
R403	061G0402220 JY	RST CHIPR 22 OHM +-5% 1/16W YAGEO	
R406	061G0402220 JY	RST CHIPR 22 OHM +-5% 1/16W YAGEO	
R404	061G0402220 JY	RST CHIPR 22 OHM +-5% 1/16W YAGEO	
R126	061G0402222 JY	RST CHIPR 2.2KOHM +-5% 1/16W YAGEO	
R442	061G0402222 JY	RST CHIPR 2.2KOHM +-5% 1/16W YAGEO	
R127	061G0402222 JY	RST CHIPR 2.2KOHM +-5% 1/16W YAGEO	
R433	061G0402222 JY	RST CHIPR 2.2KOHM +-5% 1/16W YAGEO	
R135	061G0402223 JY	RST CHIPR 22KOHM +-5% 1/16W YAGEO	
R705	061G0402223 JY	RST CHIPR 22KOHM +-5% 1/16W YAGEO	
R721	061G0402223 JY	RST CHIPR 22KOHM +-5% 1/16W YAGEO	
R117	061G0402223 JY	RST CHIPR 22KOHM +-5% 1/16W YAGEO	
R492	061G0402224 JY	RST CHIPR 220KOHM +-5% 1/16W YAGEO	
R429	061G0402392 JY	RST CHIPR 3.9KOHM 5% 1/16W YAGEO	
R428	061G0402392 JY	RST CHIPR 3.9KOHM 5% 1/16W YAGEO	
R427	061G0402392 JY	RST CHIPR 3.9KOHM 5% 1/16W YAGEO	
R439	061G0402394 JY	RST CHIP R 390K +/-5% 1/16W YAGEO	
R114	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R108	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R122	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R106	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R130	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R129	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R102	061G0402470 JY	RST CHIPR 47 OHM 5% 1/16W YAGEO	
R109	061G0402471 JY	RST CHIPR 470OHM +-5% 1/16W YAGEO	
R714	061G0402471 JY	RST CHIPR 470OHM +-5% 1/16W YAGEO	
R116	061G0402472 JY	RST CHIPR 4.7KOHM +-5% 1/16W YAGEO	
R115	061G0402472 JY	RST CHIPR 4.7KOHM +-5% 1/16W YAGEO	
R134	061G0402472 JY	RST CHIPR 4.7KOHM +-5% 1/16W YAGEO	

R723	061G0402472 JY	RST CHIPR 4.7KOHM +-5% 1/16W YAGEO	
R133	061G0402472 JY	RST CHIPR 4.7KOHM +-5% 1/16W YAGEO	
R701	061G0402472 JY	RST CHIPR 4.7KOHM +-5% 1/16W YAGEO	
R121	061G0402750 JY	RST CHIPR 75OHM +-5% 1/16W YAGEO	
R113	061G0402750 JY	RST CHIPR 75OHM +-5% 1/16W YAGEO	
R107	061G0402750 JY	RST CHIPR 75OHM +-5% 1/16W YAGEO	
R123	061G0603000 JY	RST CHIPR MAX0R05 1/10W YAGEO	
R118	061G0603000 JY	RST CHIPR MAX0R05 1/10W YAGEO	
R132	061G0603000 JY	RST CHIPR MAX0R05 1/10W YAGEO	
R110	061G0603000 JY	RST CHIPR MAX0R05 1/10W YAGEO	
R103	061G0603000 JY	RST CHIPR MAX0R05 1/10W YAGEO	
R405	061G0603220 JY	RST CHIPR 22 OHM £«-5£¥ 1/10W YAGEO	
R438	061G0603331 JY	RST CHIPR 330 OHM +-5% 1/10W YAGEO	
R444	061G0603471 JY	RST CHIPR 470 OHM 5% 1/10W YAGEO	
R446	061G1206301 JF	RST CHIPR 300 OHM +-5% 1/4W fenghua	
C104	065G040210232K A	CAP 0402 1NF 10% 50V X7R	
C720	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C718	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C117	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C405	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C721	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C116	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C407	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C408	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C704	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C402	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C403	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C431	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C706	065G040210412K F	CAP 0402 100NF 10% 16V X7R	
C112	065G040222031J A	CAP 0402 22PF J 50V NPO	
C113	065G040222031J A	CAP 0402 22PF J 50V NPO	
C119	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C109	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C715	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C410	065G040222415K Y	CAP CHIP 0402 220nF 16V X5R	
C103	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C105	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C108	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C107	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C111	065G040247312K T	CAP 0402 47NF 10% 16V X7R	

C102	065G040247312K T	CAP 0402 47NF 10% 16V X7R	
C101	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C106	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C110	065G040250931C Y	CAP 0402 5PF 0.25pF 50V NP0	
C412	065G040256031J Y	CAP CHIP 0402 56pF 50V NP0 +/-5%	
C413	065G040256031J Y	CAP CHIP 0402 56pF 50V NP0 +/-5%	
C406	065G0603475A5K T	CAP CHIP 0603 4.7UF K 10V X5R	
C409	065G0805106A5K A	CAP 0805 10UF 10% 10V X5R	
C401	065G0805106A5K A	CAP 0805 10UF 10% 10V X5R	
C404	065G0805106A5K A	CAP 0805 10UF 10% 10V X5R	
FB401	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB402	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB406	071G 56K121 M	CHIP BEAD 120OHM 6A MGLB2012-120T-LF	
FB101	071G 59G301 M	CHIP BEAD 0603 300R 25% 200mA	
FB190	071G 59G301 M	CHIP BEAD 0603 300R 25% 200mA	
D101	093G 64 42 PP	BAV70 SOT-23	
D103	093G 64 42 PP	BAV70 SOT-23	
ZD104	093G 39S940 T	ZENER GLZ5.6B 5.6 0.5 MINI-MELF LL-34	
ZD103	093G 39S940 T	ZENER GLZ5.6B 5.6 0.5 MINI-MELF LL-34	
ZD101	093G 39S940 T	ZENER GLZ5.6B 5.6 0.5 MINI-MELF LL-34	
ZD102	093G 39S940 T	ZENER GLZ5.6B 5.6 0.5 MINI-MELF LL-34	
C425	093G 64S501 SU	ESD MLVS0402M04 4V 402	
C423	093G 64S501 SU	ESD MLVS0402M04 4V 402	
C426	093G 64S501 SU	ESD MLVS0402M04 4V 402	
C424	093G 64S501 SU	ESD MLVS0402M04 4V 402	
C427	093G 64S501 SU	ESD MLVS0402M04 4V 402	
U401	356G0562080B17	SCALER TSUMU59AHN-1 LQFP-80	
	709G52700HS001	COMSUMPTIVE ASSY	
E715	715G5270M01000004I	MAIN PCB FR4 DS 80*72*1.6mm	
	H52G 2191 1	美纹胶带	
	H52G1701 1	MESH PRINTTING_PAPER	